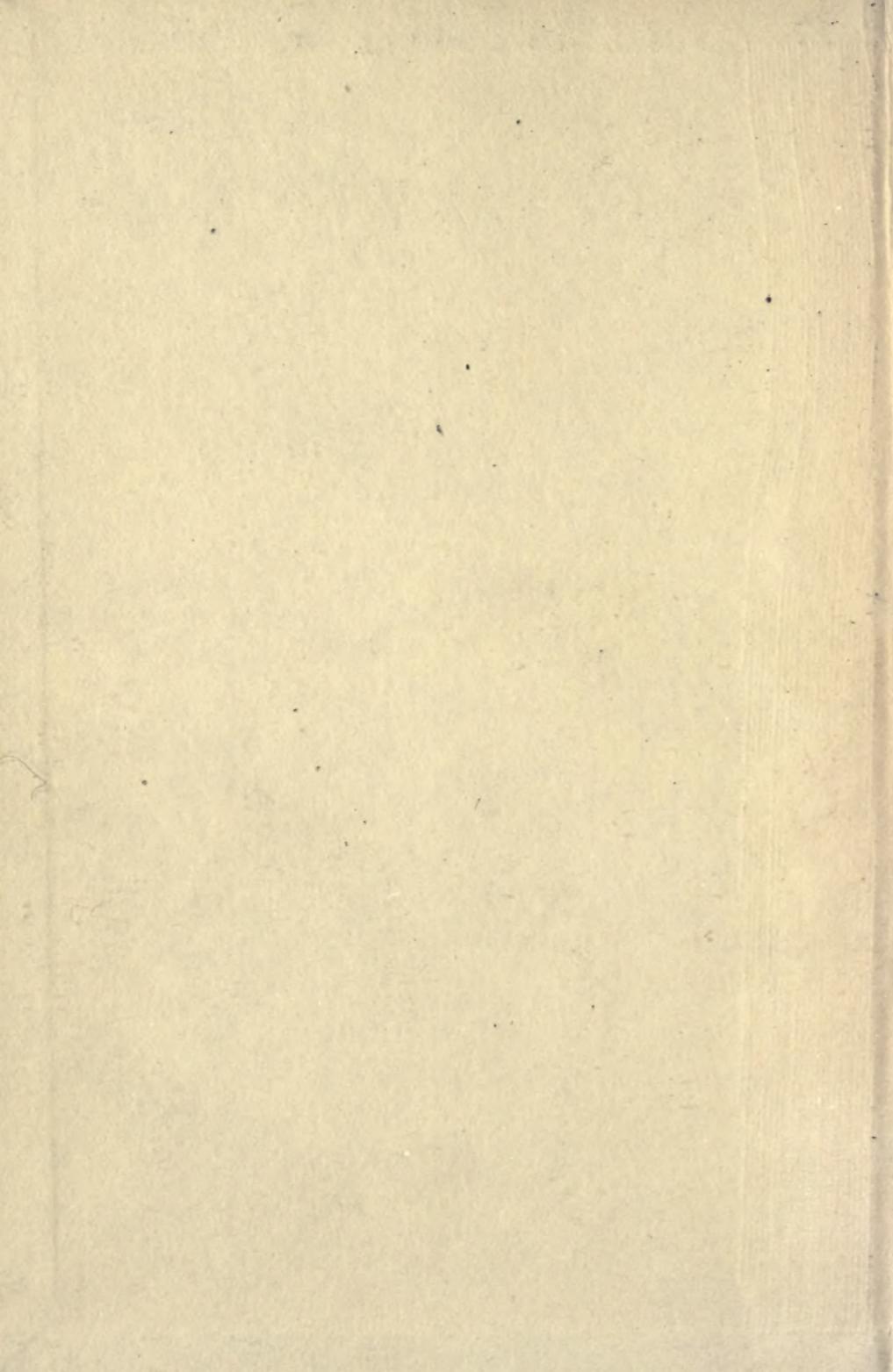


3 1761 067048199

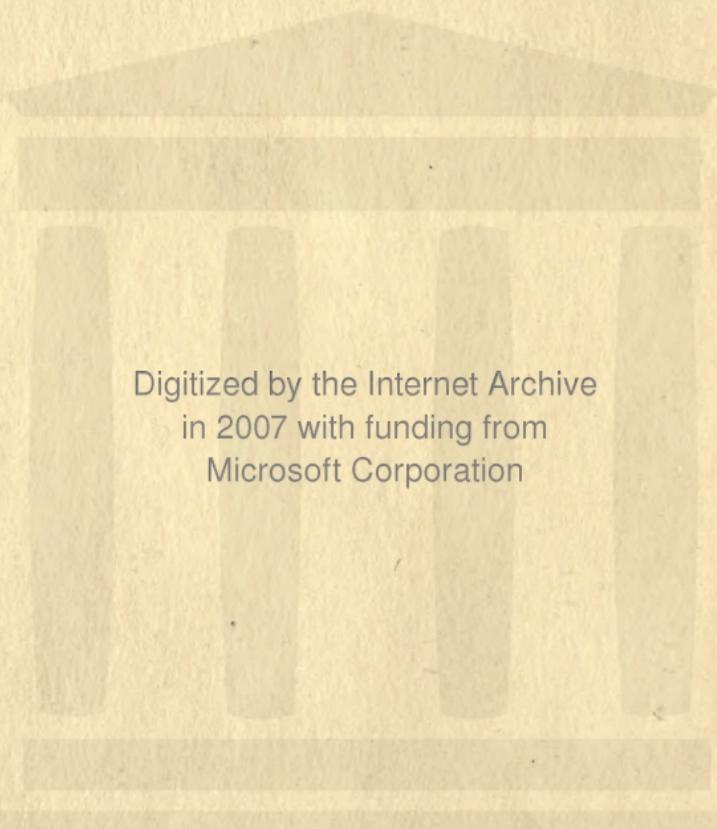
RATIONAL ATHLETICS
FOR BOYS
—
REILLY



D·C·HEATH & CO.



371.73



Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation

RATIONAL ATHLETICS FOR BOYS



DANIEL McDONALD—FIRST SENIOR ATHLETE

Height, 5 ft. 5 in.; weight, 119 lbs.; Age, 15 years.

Rating in Posture, 10; Alertness, 9; Running, 10; Hygiene, 9.

Chinning the Bar, 14 times; Hop, Step and Leap, 28 ft.; Standing Broad Jump, 6 ft. 9 in.; Trunk Lifting, 32 times; Combination Dip, 14 times; Putting 6-lb. Medicine Ball, 30 ft.; Chest Expansion, 4 in.

MHy
R RATIONAL ATHLETICS
FOR BOYS

BY

FREDERICK J. REILLY

PRINCIPAL, PUBLIC SCHOOL 33, THE BRONX
NEW YORK CITY

138284
115/16

D. C. HEATH AND COMPANY
BOSTON NEW YORK CHICAGO



COPYRIGHT, 1915, BY
D. C. HEATH & COMPANY

1 C 5

DEDICATED TO
GENERAL GEORGE W. WINGATE
PRESIDENT, PUBLIC SCHOOLS ATHLETIC LEAGUE

CONTENTS

	PAGE
LIST OF ILLUSTRATIONS	8
PREFACE	9
I. INTRODUCTORY	13
II. PHYSICAL TRAINING VS. ATHLETICS	20
III. RATIONAL ATHLETICS	34
IV. HOW THE WORK IS TAKEN UP	55
V. THE EXERCISES AND THE APPARATUS	68
VI. SOME RESULTS ACHIEVED	83
VII. THE PENTATHLON	88
VIII. SOME EXPERIMENTS WITH GIRLS	101
IX. RATIONAL ATHLETICS FOR ADULTS	110
APPENDIX	115
INDEX	124

LIST OF ILLUSTRATIONS

Daniel McDonald: First Senior Athlete	<i>Frontispiece</i>
	PAGE
A Modern Varsity Football Game, 1914	26
A Boy Scout	33
Fig. 1.—Obverse of Physical Training Record Card	37
Fig. 2.—Reverse of Physical Training Record Card	38
Fig. 3.—Classroom Chart Used in Rational Athletics	43
Fig. 4.—Table of Results, Fall Term, 1914	52
Fig. 5.—The Two Minute Drill	58
Fig. 6.—One of the Banners Awarded in Inter-Class Contests	59
Fig. 7.—Testing Chest Expansion	60
Fig. 8.—Floor Plan of Boys' Gymnasium	62
Fig. 9.—The Squads Line Up	63
Fig. 10.—The Squads in Action	63
Fig. 11.—Taking Places for Exercise	64
Fig. 12.—Ready for Exercise	65
Fig. 13.—The Standing Broad Jump	69
Fig. 14.—The Combination Dip: First Count	71
Fig. 15.—The Combination Dip: Second Count	72
Fig. 16.—The Combination Dip: Third Count	73
Fig. 17.—Testing the Combination Dip	74
Fig. 18.—Target for Practice in Pitching	80
Platform of Public School 2, New York City	85
Fig. 19.—Pentathlon Trophy	90
Field Day of Public School 33, New York City	94
Carolyn Miller: Best Girl Athlete	100
Fig. 20.—Floor Plan of Girls' Gymnasium	103
Fig. 21.—Target for Baseball Throwing	104
Fig. 22.—The Girls' Squads in Action	107
Fig. 23.—The Adult's Record Card	113

PREFACE

IN November, 1911, the Committee on Athletics, of the New York Board of Education, General George W. Wingate, Chairman, issued a pamphlet calling attention to the system of "general athletics" then in use in Public School No. 2, Manhattan, stating that its "success has been so pronounced that it is desired to call it to the attention of the principals and teachers throughout our educational system."

"Rational Athletics," as this system was called later, was at that time in its infancy. Since then it has been developed to such an extent that its sponsors feel that it is time a full and complete description of this work were given out. Hence this manual.

The method here described is simply an effort to combine the benefits of all-around physical training with the keen joy of athletic competition and to give every boy an equal chance — doing away entirely with the idea of a picked team. The plan presented

has been worked out for boys in an elementary school. The same method, with an endless variety of exercises, may be applied in high schools and colleges, boys' clubs, summer camps, in the army and navy, and in the militia.

The author is deeply indebted to the teachers in Public School No. 2, Manhattan, and Public School No. 33, The Bronx, who have aided in the development of the plan; to the special teachers, Mr. Barnet Shapiro and Mr. Harry Cohen, for valuable assistance; to Dr. Crampton, Director of Physical Training, for encouragement and helpful advice; and in a special manner to Dr. Aldinger, Assistant Director in charge of Manhattan and The Bronx, for unfailing resourcefulness in helping us out of difficulties.

F. J. R.

NEW YORK CITY,
March, 1915.

RATIONAL ATHLETICS FOR BOYS

RATIONAL ATHLETICS FOR BOYS

I. INTRODUCTORY

Physical training work naturally divides itself into three parts:

1. Corrective work, prescribed for an individual by a competent adviser and designed to bring that individual to a state of harmonious development.
2. Class work, prescribed for large groups and consisting of rhythmic work, response work, apparatus work, etc.
3. Athletics, which means competition for a prize either in an organized game, or in some track or field "event" usually restricted to a picked few called the "team."

In the public schools we cannot attempt much in the first of these divisions; we are dealing with large numbers of children and have not the time for that kind of work. Moreover most teachers of physical training

are not competent to examine, prescribe, and carry out an individual scheme of correction, even though they may desire to do so.

Therefore, for the present at least, our attention must be limited to the second and third divisions: class work and athletics.

It is my contention that the fundamental error has been the separation of these two. Physical training class work has been something formally prescribed and arbitrarily imposed upon the children, with an utter indifference to their mental attitude toward it. On the other hand, athletics and the keen joy of competition, the invaluable mental, moral, and physical training that comes from wholesome sport, have been reserved for the favored few, and in the process athletics has become so intense, so specialized and commercialized, that I am not alone in saying that it is probably doing more harm than good in our schools and colleges to-day. As a separate institution, divorced from regular school work, controlled by professional coaches whose livelihood depends on turning out a winning team, and engaging actively less than 20 per cent. of the students in our colleges, it has built up a double standard of morals that

augurs badly for our future business and professional ethics.¹

The movement to-day, a movement that deserves all possible encouragement, is to bring athletics and class work in physical training together; to inject into the carefully prescribed course in physical training the vim, the lively interest to be found only in some form of game or athletic contest, and at the same time to make athletics the business of the many, not of the few; to bring the benefits of athletics within the reach of all; to cleanse it of its present undemocratic methods and of its "win at any price" tendencies.

The theory and practice of physical training, as in any other department of education, must be adapted to the age, to the degree of civilization and the conditions of life which they aim to meet. The conditions surrounding the ancient Athenian youth, the English boy of the fourteenth century, or our own early pioneer boys, would all necessarily differ widely from the conditions existing to-day

¹ See Dr. Wm. L. Dudley, *Physical Education Review*, April, 1913; Dr. Chas. E. Smith, *Physical Education Review*, Jan., 1914; Prof. C. A. Stewart, *Atlantic Monthly*, Feb., 1914.

in a great manufacturing and commercial city. Nevertheless, there are certain underlying principles that have varied but little, if any, through the ages, and these should be held fast and never lost sight of in the effort to adapt ourselves to present day conditions.

I should group the aims to be sought in physical training under five heads:

1. Health, the proper functioning of all the organs; ability to do a good day's work and to become a good ancestor. This implies the inspiration of an ideal, the arousing of interest, and the giving of the information necessary for an intelligent care of the health.

2. Strength and endurance. The military idea may be subordinated, but it should not be lost sight of entirely, since nations, like individuals, sometimes have to fight for their lives. Strength is needed, also, to play a man's part in case of danger from fire, flood, storm, or other elemental catastrophe, and to protect ourselves and others from bullies.

3. Beauty of form and grace of carriage. These are objects well worth working for,—consciously on the part of the instructor, even if unconsciously by the pupil.

4. A living interest in some form or forms of active sport. Such an interest will greatly influence the boy's after life by removing him from many temptations in his youth and by tending to lure him out of doors in his later life.

5. The team spirit. To teach the boy to work with and for his fellows, to play the game for all it is worth, not to give up, and, above all, *to play fair*.

These ideas are not new; they have been voiced by many; they have been particularly well presented by Dr. Henry S. Curtis in the *American Physical Education Review* for February, 1914. But it is well to state briefly here the aims we have had in mind in departing from the methods usually followed in the schools.

We have tried to establish a system of physical training based on athletics, and we have selected a series of exercises which, if followed consistently, will, we believe, produce a harmonious physical development. In our choice of exercises we have been much hampered by the lack of equipment, but, in the main, we are satisfied with our present selections.

It is in the method, however, more than in the material, that we have made the greatest departure. We have applied the method of athletics to our physical training exercises. First, each boy is in competition against his own record as shown on his record card at the end of the preceding term; second, each class is divided into three squads, selected as boys choose sides by three captains, these squads being in competition against one another; third, the classes of the same grade in our school are competing; and lastly, we have matched our school, grade by grade, against the corresponding grades in neighboring schools,—some friends of the school having put up a unique set of trophies for these inter-school contests. Some 2220 boys took part in these competitions last year.

In the inter-school contests, 80 per cent. of the register of each grade must take part, the sum of all the points won by any grade being divided by the number competing to get the average. This is all-around athletics in two senses; first, in that each boy takes part in a number of exercises designed for thorough physical development; and second, in that every boy in the school takes part,

except those excluded by the doctor's orders. And better still, there is no compulsion about it, the interest of the boys being so keen that we have to be on the alert to keep those with weak hearts and other physical defects from slipping in—which is hardly the usual state of affairs, as any physical training teacher knows.

II. PHYSICAL TRAINING *vs.* ATHLETICS

Physical training or “physical culture” has become almost a mocking and a byword in our language. False prophets have arisen one after the other, each proclaiming far and wide that he had at last discovered the one great, infallible system of physical culture that would make us all *Sandows* or *Annette Kellermans*. But when we have tried out these systems we have found that they consisted of the same tiresome daily repetition of certain set forms of exercise that very few of us have the moral stamina to keep up for very long.

In our schools, one system, one course of study, has succeeded another, each beginning with bright hopes and each ending in the usual disillusionment. And why? Because these systems of physical training, although consisting of carefully prepared, well balanced series of exercises designed to produce a fine condition of harmonious development, were, as a rule, in themselves tiresome and uninteresting. If it is a strain even upon us

teachers to keep on doing something uninteresting, day after day, in the hope of some benefit to be derived ultimately, imagine how irksome that sort of thing must be to children! To stand in rows on the floor and to go through certain movements prescribed by the teacher, with probably not the least idea of a reason for any of them, doing them simply because the teacher says so—is it any wonder that most physical training lessons are listless, lifeless performances, except where the teacher is unusually magnetic and expends a great deal of energy in arousing his pupils? Is it any wonder that so many boys and girls seek all manner of excuses for getting out of the work? Isn't it rather a wonder that they don't rebel and go on strike against what must often seem to them an inane repetition of senseless movements?

Advocates of physical training have pleaded for more of this work to be introduced in the schools, on the ground that it afforded relaxation and relief from the strain of ordinary class work. And yet every authority is agreed that the most exhausting period in the day is the physical training period! No clearer evidence of the way in which school children

have been defrauded is needed than these facts.

Imagine a class marched under strict discipline up or down several flights of stairs to gymnasium or yard, lined up in set order, put through a few minutes of "tactics"—marching, facing, forming lines, etc.—then a few minutes of "response work" in which they execute new and complicated movements to order, then perhaps a few minutes of "rhythmic work" in which they perform, in unison, various movements previously learned—all, mind you, requiring close attention and concentration to understand, remember, and carry out, or, failing this, earning the sharp reproof, the scolding and perhaps punishment for not "paying attention"! Where is the recreation—the relaxation?

When it is realized that in all of this work the boy has so far not exerted himself any more than he could help, that he has not put into a single movement any more energy than the watchful eye of the teacher seemed to demand, you will understand what Dr. Crampton means when he says: "I am convinced that much of our school gymnastics has been thoroughly overloaded with response

commands, with the result that we are getting little more than mental work—a pale anæmic attempt at physical exercise, as the man in the street knows the term."

On the other hand we have athletics.

To judge by the amount of space devoted to "Sports" in the daily papers, one would imagine that we Americans were the greatest nation of athletes, of lovers of outdoor sports the world ever saw. As a matter of fact most of us get our exercise by reading the "sporting page," by discussing the decision in the latest prize fight, or, at best, by sitting and watching some hired men bat or kick a ball around a vacant lot.

To judge by the papers and the popular stories of school and college life, one would imagine that our secondary and higher institutions of learning were maintained principally to gather material for the various "teams"; and that about all our boys do in high school and college is take part in games and athletic contests.

As a matter of fact Dr. Wingert of Ohio State University reports that, while over a million dollars a year are spent on college athletics alone in this country, less than

20 per cent.—16.4 per cent. to be exact—of all college students take any active part in athletics. Think of it! Over one million dollars a year spent in exploiting 16.4 per cent. of our students! What about the other 83.6 per cent.? Well, they are privileged to pay dues, buy tickets, and get their exercise by rooting from the “bleachers.” There is democracy for you! There is equality of opportunity!

You may ask, “Why doesn’t the majority instead of the minority take part in athletics?” For the very good reason that, if they offered themselves, nine out of ten of them would be promptly rejected. The “coach” has no time to waste on ordinary young men. His business is to pick out a few husky young fellows and develop a winning team.

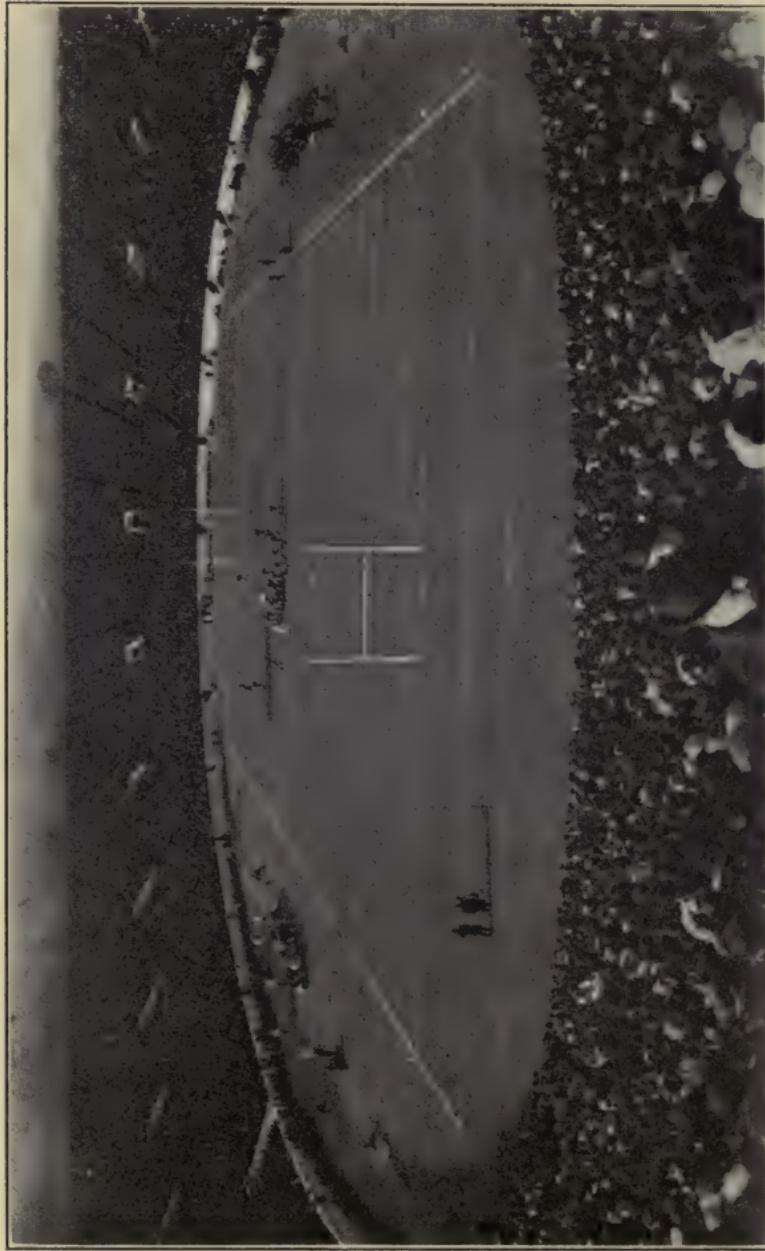
Advocates of the present system maintain that “the influence of one hundred champion athletes is far-reaching,” that “one hundred thousand boys will be so stimulated by their efforts that interest will grow.” Let this be granted. But what would happen to any of the hundred thousand if they presented themselves for training? As before intimated, they would be promptly ordered off the field.

The coach and his assistants are busy with the *team*.

What a screaming farce it would be if the professors and tutors were to select from the candidates for admission to their classes the few who showed any evidence of brains and proceeded forthwith to coach these individuals for months in the subjects in which they were strongest—the other candidates, meanwhile, playing pingpong or reading novels—and, at the end, allowed the latter to purchase tickets to come in and watch the “cracks” take their examinations! Is it any less a farce for our college faculties to allow the coaches to select a few young fellows, already blessed with unusual strength and skill, and groom them for a spectacular contest that partakes more of the nature of a hippodrome exhibition than that of an educational institution?

A perfect chorus of complaints is going up all over the country against the present system. Men who know what they are talking about state that the present individual or intensive form of athletics is objectionable for four distinct reasons:

I. *It Leads to Specialization.* The present



Copyright by Underwood & Underwood.

A MODERN VARSITY FOOTBALL GAME, 1914
(Sixty thousand spectators watching a handful of players!)

system tends to develop specialists in certain "events," rather than all-around athletes, or men of sound, well balanced physical development. The famous Mike Murphy, late dean of American trainers, said: "The first thing necessary is to find the 'event' for which you show the most natural aptitude. Then stick to it."

That sentence sums up the law and the prophets in present day athletics. The aim of athletics is not to produce strong, healthy, self-reliant men, capable of doing a good day's work in the world, but rather to produce a few experts who can do some one thing better than somebody, or anybody, else can do it.

In the schools, we do not allow a boy who is good at mathematics to specialize in that subject to the neglect of language, history, and science. Why, then, should a school or college allow specialization in physical work?

II. It Exalts the Individual. This is one of the most serious evils of athletics from the point of view of the school or college, and yet it is perhaps the most difficult to make real to those who have not intimately watched its effect upon students. It is positively sad at times to see students, faculty, and alumni

unite, seemingly, in an effort to exalt some fatuous duffer whose only claim to recognition is that he can "run a little faster, jump a little farther, or play ball a little better" than his fellows. The best students, the finest gentlemen, the most able and helpful characters, the heroes who are working their way through college against tremendous odds,—none of these begins to get such recognition as comes to the bruiser who can make five yards on "a down," or to the sprinter who can clip a fifth of a second off a record.

Read any of the hundreds of books on school and college life and see how athletics has eclipsed the school in the estimation of the students and of the public. The hero is always the "stroke" of the crew, the star "pitcher," or the marvelous "half back." The fellow who studies is either neglected altogether, or treated with contempt and referred to as a "grind."

In my humble opinion, the faculties of our schools and colleges have only themselves to blame for this peculiar condition. They have so neglected the physical side in the training of students, that the boys have taken the matter into their own hands and, naturally,

lacking experience and wisdom, they have gone about it in the wrong way. They have followed the methods of the athletic clubs, of professional and so-called amateurs, and therefore we have all the evils referred to, and especially this exaggerated worship of the track and field hero.

III. It Tends to Commercialism. The very keenness of the competition, when the fame of a school is permitted to depend on the performance of a few men, when the reputation and the livelihood of a professional coach depend on his turning out a winning team, inevitably leads to all the varying degrees of crookedness that are embraced under the term "commercialism." It would seem to be rather a severe commentary on our business methods when commercialism is a synonym for dishonesty! But such it is.

Only those on the inside know:

1. The "inducements" offered to promising youngsters to join certain colleges — witness the scramble last year to get Howard Drew, the famous colored sprinter.
2. The "cramming" to pull doubtful athletes through their examinations so that they will not be barred by the virtuous faculty.

3. The sinecure positions and the scholarships given to athletes to help them "work their way" through college.
4. The secret coaching in ways to beat the rules and evade the watchful eye of the referee.
5. The not infrequent "accidental" maiming of a dangerous opponent, to put him out of the game.

Even if it were possible to eliminate all these evils—and it is not—a system that makes athletics the sole, absorbing business of the men who "make the team," during the months they are in training, is so foreign to the purposes of an educational institution that it is hard to understand how and why it is tolerated.

IV. It Leads to Overtraining the Few and Neglecting the Many. I have no desire to enter into a discussion of the effect of intensive athletics on the health of students in after life. Where there is so much criticism, it seems reasonable to suppose there must be some ground for it. The point I wish to emphasize is that no school has a right to allow a few boys to be picked out and trained, or overtrained, merely to make a show, while neglecting the great majority. That seems

such a self-evident proposition that I shall not elaborate upon it.

A great mass of criticism of the present system has been written in recent years by high-minded men who know whereof they speak. Many plans have been suggested for doing away with various evils, but to my mind none of them goes to the root of the matter. The system is so fundamentally wrong that it must be radically reformed. Even granted that human nature could be so changed that no college man or coach would resort to any dishonest practice in order to win, the whole scheme is so undemocratic that it should be driven out of educational institutions and reserved for the athletic clubs of professionals or so-called "amateurs."

If there is any good in athletics — and there certainly is — then every student is entitled to an equal opportunity to get all the good he can out of it, just as he is entitled and encouraged to get all the good he can out of the lectures, the libraries, and the various other activities of college and school life.

The present system of athletics is a pyramid standing on its apex. "The honor of the school" is carried on the shoulders of a picked

few, the school team. Let us turn the pyramid right side up. Let the honor of the school, in athletics as in everything else, depend on the high average attained by all the students. Make athletics part of the course of study in physical training. Let the director of physical training devise a course of study with a minimum of corrective and educational work for securing good posture and muscular co-ordination, and a maximum of athletics, *real athletics*, of the kind the boys like. Work out a plan of competitions that will interest the boys, and they will do the rest. Give opportunity for the playing of all sorts of games among the boys of the school, but abolish all inter-school contests based on the "team" idea; or at least, relegate them to a position of secondary importance. If an inter-school contest is desired, let the school team be not less than 80 per cent. of the register, and let the events be such as to show the all-around physical training work of the school.

Such work might very properly be called "Rational Athletics," and such a plan, worked out for boys in elementary schools, is fully described in the succeeding chapters. The

same method, modified to suit conditions, can easily be worked out for high schools and colleges. Boys' clubs, Scout patrols, the



Courtesy of Boy Scouts of America. A BOY SCOUT.

militia and regular army, organized for athletics on this basis, would do vastly more for the physical welfare of our boys and young men than can ever be accomplished by the present intensive, individual, selective system of athletic training.

III. RATIONAL ATHLETICS

The new course of study, prepared under the direction of Dr. Crampton for the public schools of New York, prescribes five parts for a lesson in physical training.

1. **Introductory** — simple “warming up” movements to prepare the class for the real work.
2. **Corrective** — exercises designed to secure good posture and carriage.
3. **Educational** — exercises for “training in form, precision, alertness, control, isolation, coördination, and inhibition.”
4. **Hygienic** — vigorous work to exercise the muscles and stimulate the organs.
5. **Recreative** — folk-dancing, games, athletics, for fun and relaxation.

There is good psychology underlying this arrangement, and in our work we follow this plan, giving about one-half the time of a lesson to the first three elements and the remaining half to our own exercises, which come under the heads of hygienic and recreative. From

this it will be seen that the system we are here aiming to present is not something arbitrarily opposed to the course of study. It has, in fact, been worked out with the full knowledge and consent of Dr. Crampton and with the active coöperation of Dr. Aldinger, Assistant Director.

Rational Athletics is a system of physical training designed for use in conjunction with the new course of study, but offered frankly as a substitute for the present intensive system of athletics as conducted under the auspices of the Public Schools Athletic League, and as a vast improvement on the extensive plan of so-called "Class Athletics," also conducted by the League.

With this introduction, let us look at the Physical Training Record, on which are summed up the results of the term's work.

This Record is written up in duplicate at the end of the term. One copy, on white paper, is sent home, signed by the parent, and returned to the teacher to show him that it has been seen at home. It then becomes the property of the boy. The duplicate, on yellow cardboard of the same size (5" x 8"), remains on file in the school, becoming a

progressive record of that particular boy's work in physical training.

The first four items require little explanation. The weighing is done on a spring balance with a handle from which the boy hangs. This permits much faster weighing than shifting weights on a balance scale, and is quite accurate enough for our purpose. Height is taken by standing backed up to a scale on a door frame. Allowance is made for the height of the shoe heel, and a class is thus weighed and measured in a very short time. In fact all through the work every effort has been made to economize time so that the maximum amount of active exercise may be obtained in the time allowed, without infringing on the other work of the school. This will appear in the detailed description of several of the exercises used.

The first five items in the Record, for which points are given, form a group by themselves. The Running (sprints), Chinning the Bar, and Standing Broad Jump are the events used by the P. S. A. L. in its extensive plan of Class Athletics. These three, with a satisfactory mark in Posture, and satisfactory ratings in the rest of the school work, form

PUBLIC SCHOOL 33, THE BRONX

Physical Training Record of...

FREDERICK J. REILLY, PRINCIPAL

FIG. 1.—OBVERSE OF PHYSICAL TRAINING RECORD CARD (REDUCED)

EXPLANATORY NOTE

“Rational Athletics” is a system of physical training through a carefully arranged series of athletic competitions. Its object is to give every boy, except those excluded by the doctor’s orders, the training in wholesome sports that is usually given only to a selected team — with this exception: we do not allow boys to “specialize.”

Posture, Alertness, Running and Hygiene are marked on a maximum of 10.

In all the other items, the boy must reach a certain minimum standard set for his grade, before he begins to score. If he can pass the minimum, he wins points according to a carefully graduated scale. As the boys become more proficient, it may be necessary to raise the standards. At present, ratings are given as follows:

60 points — Junior, or Third Class Athlete.

80 points — Intermediate, or Second Class Athlete.

100 points — Senior, or First Class Athlete.

To qualify as an athlete, there is no scholarship test. The rating depends wholly on the boy’s physical skill.

To win the P. S. A. L. Athletic Badge, however, he must qualify in the first five events on our program and must have satisfactory marks, — “B” or better in Effort, Proficiency and Conduct.

The Athletic Badge, “Bronze Button,” is the mark of the all-around boy.

the basis for the Bronze Button or Athletic Badge Test, held once a year. We have added Alertness as an item deserving special recognition and being closely related to good posture.

The next five (Nos. 6 to 10) are exercises which we have adopted as combining:

1. Good all-around physical exercise.
2. Natural interest for the boys.
3. A minimum of apparatus.

No. 11 is devoted to a rating in Physiology and Hygiene as called for by the Course of Study. The fact that his rating as an athlete is appreciably affected by his mark in this subject will lend an extrinsic interest to this subject that is otherwise conspicuously missing.

Nos. 12 and 13 were left blank with the idea of filling in further exercises as the demand arose. Already these spaces have been preëmpted, — one, as a result of a conference with Dr. Aldinger, in which he suggested a device for training in pitching, which has already been worked out and has aroused considerable interest among the boys; the other, a fine grip exercise, borrowed from Dr. Crampton's health record now in use in the pre-vocational

schools. We shall probably not add any more exercises to our list. But should we find that any one we are now using fails in interest, we shall substitute something else, putting a paster over the space now given to the rejected one. This has already been done in one case, where we dropped an exercise known as "Trunk Lifting" and substituted the High Jump, at the request of the squad leaders.

In addition to this, and acting upon a suggestion from Dr. Crampton, we examine every boy's medical record; and where he is found to have some curable defect, in teeth, nose, eyes, tonsils, etc., we offer ten extra points to be added to his score if he has remedied that defect before the end of the term.

The system has flexibility. The only tests applied to any exercise to be included are:

1. Does it interest the boys?
2. Will it help produce all-around development?
3. Is it practicable, i.e., is it safe, and not too expensive?

The last two spaces in the Record Card are for the total of the points won in all the exercises enumerated, and the boy's con-

sequent rating as an athlete. The last column records the boys who have won the Athletic Badge, or Bronze Button.

This brings us to a consideration of the scoring system.

THE SCORING SYSTEM

As stated in the Explanatory Note on the back of the Record Card, Posture, Alertness, Running, and Hygiene are marked on a basis of 1 to 10. The class teacher and the physical training teacher, who may or may not be the same, give marks in Posture and Alertness, at any time, just as they do in Conduct. The teacher who gives the lessons in Hygiene, generally the class teacher, marks in that subject just as in any other. About once a month, one or two of the men teachers test the classes in running and give each boy a rating. The method used to secure the latter is as follows:

The class is lined up back of the starting line, the teacher standing at the finish line, stop watch in hand. As the big second hand passes over a given mark, he snaps his hand-kerchief and the first boy starts to run. As the runner crosses the line the teacher, without

stopping the watch, calls out the time and a boy, acting as clerk, puts it down opposite that runner's name on a chart which is kept in the classroom. (*See Fig. 3.*)

As the second hand passes over the next marked division (10 or 15 secs.) the teacher snaps his handkerchief again and the second boy starts; and so on to the end. In this way a class can be tested in running and each boy given an individual mark in from five to ten minutes. Of course this mark is only an approximation, but stop watches are expensive and we cannot afford to wear ours out by snapping the time on every one of hundreds of boys. Some day we hope to have an automatic recording device for timing that will stand up under the use that we will give it.

The distances which the boys run are the same as used by the P. S. A. L. in the "Class Athletics" contests, viz:

5th Year, 40 yds.	7th Year, 60 yds.
6th " 50 "	8th " 80 "

From a study of the various averages in class running made by classes throughout the city, we have fixed on the following standards:

Fig. 3.—CLASSROOM CHART USED IN RATIONAL ATHLETICS.

5th Year,	40 yds.,	6 secs.
6th "	50 "	7 "
7th "	60 "	8 "
8th "	80 "	10 "

The boy who equals these standards is credited with eight points. Those who can do better are given nine or ten, according to their speed. Those who are slower get seven, six, or five.

In the winter months we substitute a potato race for straightaway running. Six baskets are placed on a line, about ten feet apart. Twenty-six feet away from the starting line, the first "potato" is placed, and three more are placed at distances of eight feet each, beyond that, the farthest being fifty feet from the starting line. The Eighth Year boys use this full course; each boy in picking up or replacing the four potatoes, runs a distance of 304 feet,—practically one hundred yards. For the Seventh Year, we bring up the starting line ten feet, which automatically shortens the total distance run by eighty feet, making it 224 feet,—about seventy-five yards. For the Sixth Year, we leave off the farthest potato, thus again reducing the total

distance by eighty feet, making it 144 feet, or about fifty yards. For the Fifth Year, we bring up the starting line five feet more, using three potatoes as before, thus making the run 114 feet, or about forty yards.

In each of the remaining exercises we have established what we call minimum standards; that is, each boy of a certain grade must chin the bar so many times, jump so many feet and inches, etc., or he scores a zero. When he reaches the minimum in any exercise, he scores five points. Then, as he is able to do more, he earns more points, according to a carefully graded system, to be explained later in detail.

In order to keep something like a balance between the various events and to discourage excess in any one exercise, it is provided that no one can earn more than fifteen points in any exercise.

MINIMUM STANDARDS AND SCALE OF CREDITS

Chinning the Bar

	5A	5B	6A	6B	7A	7B	8A	8B
Min.	3	4	5	6	7	7	7	7

Those reaching the minimum, score five points. One point more is allowed for *each pull up* beyond that, but no boy is allowed to earn more than fifteen points. This means that an 8B boy is not allowed to chin the bar more than seventeen times. The standards remain the same through the Seventh and Eighth Years.

Standing Broad Jump

5A Grade, Minimum 4 ft. 3 ins.

5B	"	"	4	"	6	"
6A	"	"	4	"	9	"
6B	"	"	5	"	0	"
7A	"	"	5	"	3	"
7B	"	"	5	"	6	"
8A	"	"	5	"	9	"
8B	"	"	6	"	0	"

Those reaching the minimum, score five points. Three points more are allowed for *every six inches* jumped beyond that, but no boy is allowed to earn more than fifteen points.

Combination Dip

5A	3 times	7A	7 times
5B	4	"	"
6A	5	"	"
6B	6	"	"

Those reaching the minimum, score five points. One point more is allowed for *every combination dip* beyond that, with the limit at fifteen points, as before. It will be noticed that the standards are the same as for Chinning the Bar.

Hop, Step, and Leap

Each class is divided into three groups:

A Boys under 4 ft. 6 ins.

B " " 5 " 0 "

C " over 5 " 0 "

	<i>A</i>	<i>B</i>	<i>C</i>
--	----------	----------	----------

5*A* and 5*B* must cover 16 ft. 18 ft. 20 ft.

6*A* and 6*B* " " 18 " 20 " 22 "

7*A* to 8*B* " " 20 " 22 " 24 "

Those reaching the minimum, score five points. One point more is allowed for *every foot* beyond that, up to the limit of fifteen points.

High Jump

As in the Hop, Step, and Leap, the standards depend on height and grade.

	<i>Under</i>	<i>Under</i>	<i>Over</i>
	4 ft. 6 ins. (A)	5 ft. (B)	5 ft. (C)
5th Year Min.	2 ft. 6 in.	2 ft. 9 in.	3 ft. 0 in.
6th "	2 "	3 "	3 "
7th "	3 "	3 "	3 "
8th "	3 "	3 "	3 "

Those reaching the minimum, score five points. One point more is allowed for *every inch* beyond that; limit, fifteen points.

Putting the Shot

5A	Min. 16 ft.	7A	Min. 20 ft.
5B	17 "	7B	21 "
6A	18 "	8A	22 "
6B	19 "	8B	23 "

Those reaching the minimum, score five points. One point more is allowed for *every foot* beyond that, up to the limit of fifteen points, as before.

Deep Breathing: Chest Expansion

	5A—5B	6A—6B	7A—7B	8A—8B
Min.	1 $\frac{3}{4}$ ins.	2 ins.	2 $\frac{1}{4}$ ins.	2 $\frac{1}{2}$ ins.
	2 $\frac{1}{4}$ "	2 $\frac{1}{2}$ "	2 $\frac{3}{4}$ "	3 "
	2 $\frac{3}{4}$ "	3 "	3 $\frac{1}{4}$ "	3 $\frac{1}{2}$ "
Max.	3 $\frac{1}{4}$ "	3 $\frac{1}{2}$ "	3 $\frac{3}{4}$ "	4 "

Those reaching the minimum, score five points. Three points more are allowed for the first half inch beyond that; three for the next half inch; and four for the next; the maximum, as in the other exercises, being fifteen.

This completes the scoring system as it now stands. Of course the system is flexible, and standards will have to be changed as the boys become more proficient, the aim being to keep the minimum within the reach of the great majority after reasonable practice, and the maximum high enough to be attained by only a few of the best. The rating of Senior or First Class Athlete must not be cheapened by being made too common. (*See Frontis.*)

The maximum number of points obtainable at present is 145, which allows a generous amount of leeway as the standards are now; that is, Junior, 60; Intermediate, 80; Senior, 100. When the boys become more proficient and enough of them qualify for the higher ratings to lower the value of the latter, the standards will be raised to, say — Junior, 80; Intermediate, 100; Senior, 120.

This year the Boys' Athletic Association has provided a silver button to be given to the boys who qualify as Senior or First Class

Athletes. (*See Cover Design.*) This button differs from the Athletic Badge of the P. S. A. L., in that there are no scholarship or other eligibility conditions attached to it. It is a prize for excellence in physical training, pure and simple. One of the remarkable things about this system is that we do away entirely with "eligibility rules." Every boy in the school, good, bad, and indifferent, is entitled to, and receives, the best that we can give him in the way of physical training. This does away with all question of unfairness in marking and with all possibility of scandal in connection with athletics. As a matter of fact, we find that the class and school spirit developed by this method is quite as effective, in a disciplinary way, as anything that can be claimed for the old system of admitting to the school team only boys who have received satisfactory marks.

This scoring system may seem rather elaborate and complicated, but in practice it will be found simple enough. Each class has to remember only the *minima* for their own grade, which they learn very quickly. A number of devices have been worked out for simplifying the scoring, which will be explained in the

succeeding chapters. In any case, the squad leaders will take care of all that, thus relieving the teacher of any bother in connection with the scoring.

About once a month, the men in charge of the upper classes give a few of their free periods, or some time after school hours, to testing the classes. The results of these tests are posted on a big chart which hangs in a prominent place on the classroom wall, where all can see it. (*See Fig. 3.*)

It will be noticed that the class teacher has practically no recording to do. At the end of the term she simply transcribes the records from the chart to the Record Card; that is all. In fact, the pupil who has been acting as clerk may do this transcribing, if desired.

THE BASIS FOR OUR STANDARDS

A study of the following table of results obtained by 220 boys in the Fall Term, 1914, will show how our standards and scale of credits are determined.

This table shows:

1. The number of boys in each grade who failed (*F*) to reach the minimum for the grade.

	CHINNING				BROAD JUMPING				COMBINATION DIP				HOP, STEP, & LEAP				TRUNK LIFTING				SHOT				PUT			
	F	Q	L	F	Q	L	F	Q	L	F	Q	L	F	Q	L	F	Q	L	F	Q	L	F	Q	L	F	Q	L	
8B	8	9	0	1	16	0	7	10	0	0	17	0	1	4	12	6	11	0	0	0	17	0	2 1/2	2 1/2	4"	4"	4"	
8A	17	12	1	5	25	0	7	18	5	0	30	0	2	1	27	11	18	1	1	25	4	3 3/4"	3 3/4"	3 3/4"	3 3/4"	3 3/4"		
7B	7	12	0	3	16	0	4	3	12	2	17	0	2	0	17	9	10	0	0	0	19	0	2 1/4"	2 1/4"	2 1/4"	2 1/4"	2 1/4"	
7A	7	18	3	4	24	0	8	9	11	4	24	0	1	4	23	16	12	0	0	0	23	5	2 1/2	2 1/2	3 1/2	3 1/2	3 1/2	
6B	10	21	0	5	26	0	15	15	1	5	26	0	2	2	27	23	8	0	2	28	1	2"	2"	3"	3"	3"		
6A	4	18	1	1	22	0	5	15	3	1	21	1	4	2	17	19	4	0	0	0	21	2	19	19	29	29	29	
5B	7	31	0	3	35	0	21	17	0	14	24	0	7	1	30	17	20	1	1	1	37	0	1 3/4"	1 3/4"	1 3/4"	1 3/4"	1 3/4"	
5A	13	21	0	4	30	0	15	19	0	13	20	1	6	3	25	28	6	0	1	33	0	18	18	28	28	28		
TOTALS	73	142	5	26	194	0	82	106	32	39	179	2	25	17	178	129	89	2	5	203	12	PER.	PER.	PER.	PER.	PER.		
PER. CENTS.	33	64.5	2.5	11.8	88.2	0	37	48.2	14.5	17.7	81.3	.9	11.3	7.7	81	58.6	40	.9	2.2	92	5.4	CENTS.	CENTS.	CENTS.	CENTS.	CENTS.		

FIG. 4.—TABLE OF RESULTS, FALL TERM, 1914

2. The number who qualified (Q); that is, those who reached some point between the minimum and the maximum.
3. The number who went the limit (L); that is, those who reached or surpassed the maximum for the grade.

In Chinning, we found that 33 per cent. had failed. It was evident, therefore, that the standard was too high. A study of the figures showed that there was improvement up to the Eighth Year, where there was a decided falling off. It was evident that the boys, arriving at the age of puberty, gaining in weight more than in strength, should not be required to reach a constantly rising minimum. Consequently the minimum now remains at seven throughout the Seventh and Eighth Year grades.

In the Broad Jump, we found that only 11.8 per cent. failed to qualify; from which we concluded that our minimum was correct. But no one had reached the limit. Consequently we decided to give one and a half points credit for every three inches, instead of one point as before. To avoid fractions, we made it three points for every six inches beyond the minimum.

In the Combination Dip, we found the same condition as in Chinning, and evidently for the same reason. The standards were therefore modified to correspond with the new standards in Chinning.

In the Hop, Step and Leap, we found that many boys in the lower classes were failing and none at all in the upper classes. Evidently, therefore, a uniform standard, depending on height alone, was not correct. Consequently we lowered the minimum for the Fifth Year grades and raised it for the Seventh and Eighth, keeping the same relative standards for height as before.

In Trunk Lifting, so many reached the limit, that we decided that the exercise was too easy. We therefore dropped it, substituting the High Jump, which the boys had been practicing all the previous term, although they had not been rated in it. Tests made recently gave us the basis for our standards.

In the Shot Put, we found 58 per cent. of failure. It was evident that the standards were too high all along the line, so they were reduced two feet for each grade.

In Deep Breathing, the results showed that our standards were correct.

IV. HOW THE WORK IS TAKEN UP

We come now to the question of how the boys get time for the practice of all these exercises, without exceeding the time allowed for physical training.

To begin with, the boys of each class are divided into three squads, each under a captain elected by themselves. As this squad organization is at the basis of all our work, it is most important that the leaders be well chosen. The best plan is to have the boys elect three, the teacher reserving the right to veto only in case weak or otherwise undesirable boys are chosen. Then let these leaders select their squads, one boy at a time, in turn, just as boys choose sides for a game. Should a leader be found lacking in the qualities necessary for leadership, a new election should be held. In fact it may be a good plan to change leaders occasionally. There should be considerable wholesome rivalry between the squads, each striving to beat the others and to contribute the greatest number of

points to the class average. These squads work together at all times, both in the classroom and in the gymnasium. Each squad leader is provided with a little notebook in which he keeps the records of his squad.

IN THE CLASSROOM

Chinning bars have been put up in the doorway of every classroom from Grade 5A, up. At ten, eleven, and two o'clock the gongs ring, whereupon each class stops work, rises, opens the windows and does the "Two Minute Drill," — the setting-up exercise prescribed by the course of study. At ten o'clock, squad number one goes to the doorway and practices Chinning under the charge of its leader, squad number two practices the Combination Dip, squad number three and all the girls do the setting-up exercises. At eleven and at two o'clock they change, so that each squad does each of these three exercises at least once in the day. Changing the order occasionally may be worth while. As the boys become interested, they find extra opportunities for practice at odd moments before nine and one, or when they have finished a piece of work and are waiting for the others. (*See Fig. 5.*)

During the study period, or while some written work is being done, boys are allowed to go up, one or two at a time, to practice Chinning, or to spread oak tag sheets, or wooden frames made for the purpose, on the floor and practice the Combination Dip. It is surprising how much can be done in this way without disturbing the good order of the class or distracting attention from the regular work.

A visitor timing a boy one day, found that he left his seat, went to the door, chinned the bar thirteen times, returned to his seat and resumed his work in forty-three seconds!

One class, by getting in each day a little extra practice in this way, ran up their points on these exercises so high that we had to change our standards and set limits that were before unnecessary.

Practice in Deep Breathing or Chest Expansion is done as part of the "Two Minute Drill." This breathing exercise as commonly practiced is a good deal of a farce, the children moving their shoulders up and down and only pretending to breathe. But when you make it a game which they are playing to win, when their individual record and the

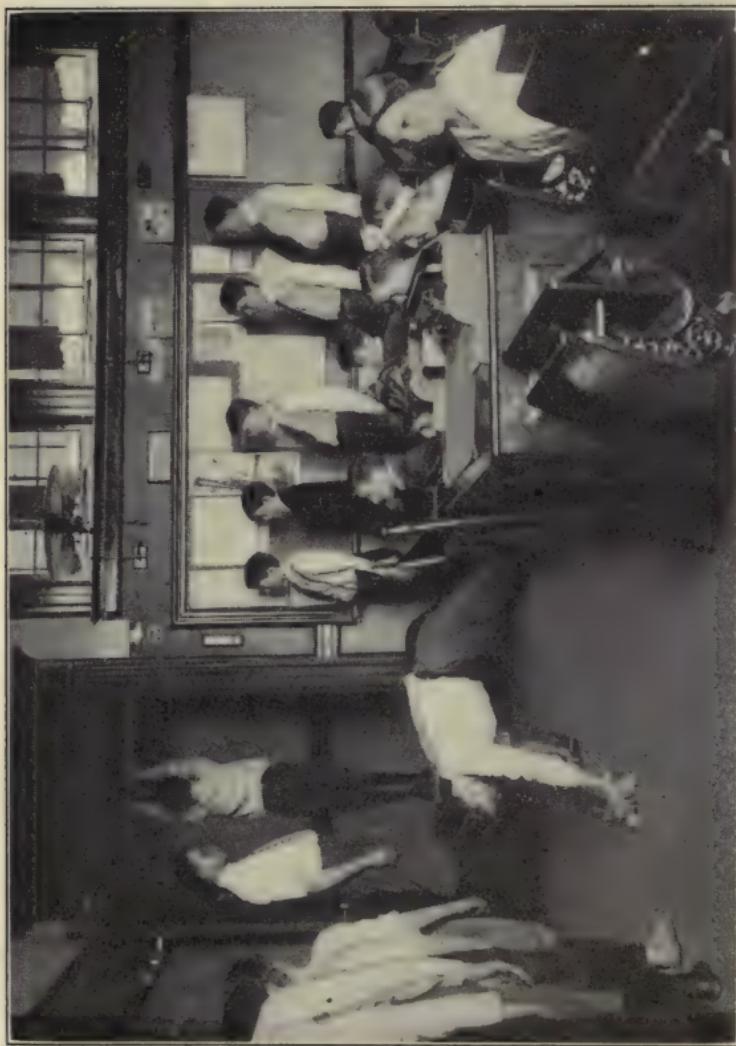


FIG. 5.—THE TWO-MINUTE DRILL
(Note the three varieties of activity: Chinning the Bar, Combination Dip and the Setting-up Drill.)

winning of a trophy for their class or their school may depend upon it, then they really do *breathe*, and deeply, too! We try to get them to form the habit of doing this breath-



FIG. 6.—ONE OF THE BANNERS AWARDED IN
INTER-CLASS CONTESTS

ing exercise when they arise in the morning, and also, when they get out in the street on their way to or from school. And we know from the improvement shown that we have in a great measure succeeded.

In testing the chest expansion, which is done about once a month by one of the men teachers, a tape is passed around the chest just under the shoulder blades and the pectoral muscles, at right angles to the backbone. This is what is known as measuring on the ninth rib. (See Fig. 7.)



FIG. 7.—TESTING CHEST EXPANSION

In this test the boy first inhales, then exhales as *hard* as he can. The tape is then drawn snug and the teacher calls out the measurement, which is put down on the chart by the pupil acting as clerk. Then the boy again inhales, expanding his chest as much as he can, the tape is again drawn snug, and the

measurement called off and recorded. The difference is the measure of expansion. After a little practice, the teacher becomes familiar with the grade standards and calls out the number of "points."

The competition in Deep Breathing, however, is not limited to the boys. Inter-class contests, including boys and girls, are conducted, and simple banners of blue felt, appropriately lettered (*see Fig. 6*), are awarded the classes showing the best average expansion. The girls are tested by some of the women teachers, during a physical training period.

This completes the list of exercises that can be taken care of in the classroom.

IN THE GYMNASIUM

As our classes are mixed, boys and girls, the boys of two classes are combined in a physical training lesson, the girls combining in the same way. This usually brings six squads in each physical training class. The lower classes take four twenty-minute periods a week; the upper classes two forty-minute periods. Of the twenty-minute periods, two are devoted to the exercises prescribed by

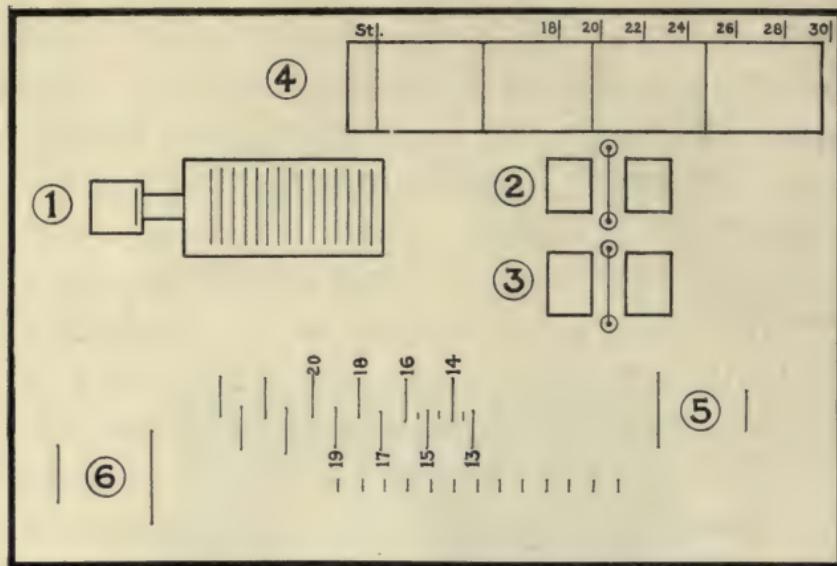


FIG. 8.—FLOOR PLAN OF BOYS' GYMNASIUM SHOWING ARRANGEMENT OF SQUADS

the course of study and two are given to our own exercises. In the forty-minute periods, the lesson as a whole is taken as outlined at the beginning of the preceding chapter, one-half the time being given to the introductory, corrective, and educational work, and one-half to our own work. We have thus two twenty-minute periods a week devoted to this style of athletics.

At a given signal, squad one goes to the mat prepared for the Standing Broad Jump; squads two and three line up opposite the High Jump stands; squad four goes to the mats arranged for the Hop, Step, and Leap;

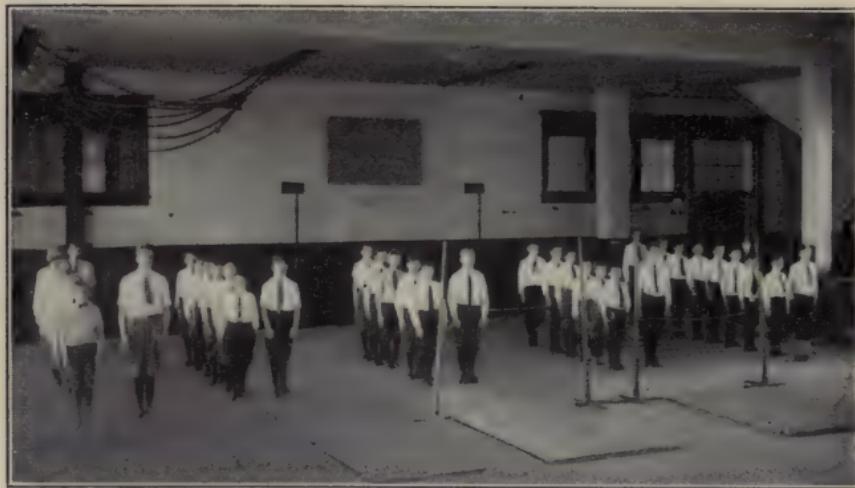


FIG. 9.—THE SQUADS LINE UP

squads five and six take positions back of marks on opposite sides of the floor, for Shot Putting. (See Fig. 9.) At a second signal



FIG. 10.—THE SQUADS IN ACTION

(Showing five squads at work, the sixth—putting the shot—being out of range of the camera.)



FIG. 11.—TAKING PLACES FOR EXERCISE

they begin work, each squad under the direction of its captain, the teacher intervening only when some particularly bad "form" needs correcting.

At the sound of the whistle, work stops.

At "*Line up!*," each squad forms in line; at "*To Places, March!*," each squad, led by its captain, marches to the next position on the floor. Squad one goes to position two, and so on, squad six going to position one. When everybody is working, it is remarkable how much can be accomplished in two and one-half to three minutes. In a few lessons the squads learn the order of exercises and

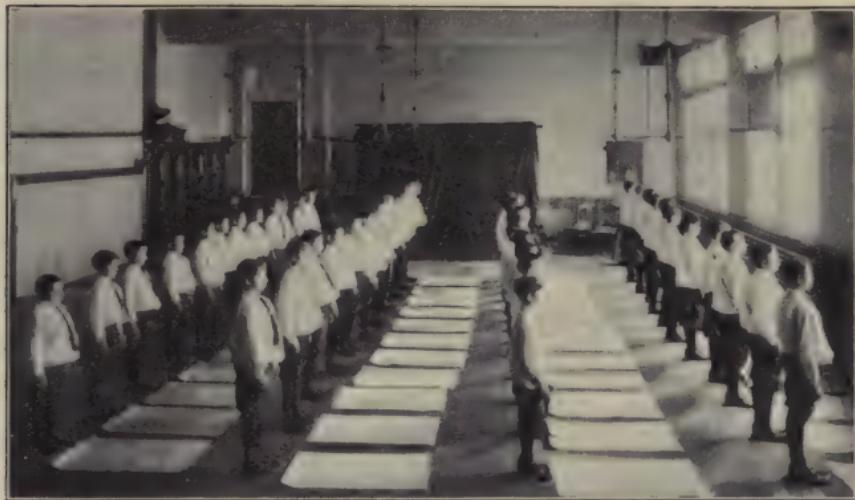


FIG. 12.—READY FOR EXERCISE

they go from one to another with a spontaneity that must be seen to be appreciated.

When beginning the work on any exercise, it is necessary of course to teach it to the class as a whole. Figures 11 and 12 show a class spreading sheets of oak tag or wrapping paper on the floor preparatory to a lesson on the Dip. In the same way it is necessary to teach the rudiments of even the Standing Broad Jump in order to get good results. So also with the Hop, Step, and Leap, and the Shot Putting. These are complicated movements which must be analyzed and taught one part at a time. For example:

Draw on the floor two parallel lines about

four feet apart; have the class run in column around the floor and *hop* over the space between these two lines which represents a stream of water. Then have them *step* over it; then *jump* over it. Then combine the hop and the step; the step and the jump; and finally the three.

So with Putting the Shot: Teach first the balancing, then the sudden twist, reversing the position of the feet without going over the line, and shooting the arm forward. Only when they have mastered all this, should the little skip with which the movement is started be added. The Shot Put can be taken as a mimetic exercise by the class as a whole until the form is learned. It is the most difficult of all the exercises and one of the most popular. (*See Frontispiece.*)

But we must not lose sight of the fact that our boys, having been started on the road toward securing a good rating as athletes and their interest having been aroused in winning trophies for their class or their school, will buckle down and learn these exercises, viewing them as a *game* which they want to learn so that they can play it to win. The word *athlete* is a word to conjure

with. No boy wants to take home a report showing that he has failed to qualify even as a "Third Class Athlete." And the husky fellows all want to get a Senior rating.

Then again, the squads, if properly handled, are competing against one another. In any case there should be a lively competition between the classes of the same grade. A little banner or other trophy, presented in assembly to the classes making the best showing, will be an added incentive. And then if the school is in competition, grade by grade, with neighboring schools, the school spirit, so easily aroused, will be another incentive to the boys to master the details of the exercises as soon as possible and to acquire proficiency in them.

This personal, impelling incentive is the essence of "Rational Athletics." It is this incentive, appealing to the boy in so many different ways, that distinguishes this system from any and all others.

V. THE EXERCISES AND APPARATUS

CHINNING THE BAR

Regular chinning bars for classroom doors can be ordered from the Supply Department; but any stout bar, securely fastened, will do. A box, or short steps for the little fellows to climb up on, is better than using a chair. Wooden cleats fastened on either side of the door frame, a foot or so from the floor, make a handy means of climbing up to the bar. The bar should be placed so as to avoid as far as possible the danger of striking the head against the top of the door frame.

The boy must first hang from the bar, arms and legs straight, then pull himself up so that his chin is just over the bar. It must be a dead pull up, no snap, swing, or kick being allowed. Boys who are unable to pull themselves up at all should practice rope climbing.

STANDING BROAD JUMP

Boys should be trained to make one good stretch, gather themselves together for a

spring, and then to jump high, gathering their feet under them and swinging the arms forward, sharply, but landing in such a way as to fall forward. To fall or step back after landing constitutes a foul. We find that it pays to have one boy hold a stick about a



FIG. 13.—THE STANDING BROAD JUMP

foot from the ground so that the boys must jump over it. As a rule boys fail to get distance because they don't jump high enough.

Attention is invited to our arrangement of the mat for jumping. (*See Fig. 13.*) One end of a regular ten-foot gymnasium mat is bolted to a board running under the mat. At the middle of this board, another, at right

angles to it, connects it with a jumping platform about eighteen inches square. This is not a spring board, but simply a solid platform of two thicknesses of seven-eighths inch boards, covered with a square of ordinary rubber stair-tread. This gives the jumper a solid, non-slipping platform, about on a level with the mat. He is not allowed to use the edge of this board as a *take-off*, but must jump from behind a line marked on the rubber. This platform is bolted to the wooden crosspiece with stout hinges, so that, when not in use, it may be thrown over on the mat, and the whole thing rolled up and put out of the way.

Measuring from the line marked on the jumping platform, lines are painted three inches apart on the mat. These are marked every six inches, on one side beginning with four feet three inches, the minimum for 5A, and on the other side beginning with four feet six inches, the minimum for 5B. It is not necessary to measure each jump with a tape line, as the jumper is credited with the distance of the last line which he cleared on the mat. To make it easy to convert the distance jumped into "points" according to our



FIG. 14.—COMBINATION DIP: FIRST COUNT

system, use a board six feet long and about six inches wide, with crosslines six inches apart, marked 5, 6, 7, etc. The line marked 5 is placed alongside of the line on the mat that measures the minimum distance for that grade. By the use of this device of a movable bar, the person in charge can tell at a glance just how many points each jumper earns.

COMBINATION DIP

The Combination Dip is one of the best all-around exercises known. It brings into play the arms, shoulders, back, loins, and legs. Care should be taken to keep the hips high and the back flat, avoiding the "sway-back"



FIG. 15.—COMBINATION DIP: SECOND COUNT

position, which is not good. It is done as follows:

1. Place the hands on the floor, the width of the shoulders apart.
2. Stretch the legs straight back, resting the weight on the hands and toes.
3. Bend the arms until the chest (not abdomen nor knees) touches, or nearly touches, the floor.
4. Straighten the arms.
- 5-6. Dip again.
- 7-8. Dip a third time.
9. Bring up the feet to the crouching position (same as in 1).
10. Stand erect.
- 11-12. Rest.



FIG. 16.—COMBINATION DIP: THIRD COUNT

1. Begin again, repeating the twelve counts. The twelve counts constitute *one* Combination Dip. When the boys have mastered the details, the leader should count at a uniform rate of about forty to the minute, emphasizing the odd numbers.

In teaching this exercise to the class, oak tag sheets or wrapping paper should be spread on the floor as shown in Figures 11 and 12. In practice, we use little wooden frames, consisting of two handles nailed to two cross-pieces about the width of a boy's shoulders apart. In testing, we place a platform bell on this frame which the boy must ring by pressing on it with his chest at each dip. (See Fig. 17.)



FIG. 17.—TESTING THE COMBINATION DIP

HOP, STEP, AND LEAP

In this the boy takes a running start, then springs from his right foot, landing on his right (*hop*), then on his left (*step*), and then on both feet (*leap*). It is an exercise that is popular with boys, but, contrary to usual expectations, requires some careful teaching before many of them get it right.

For this exercise we use a rubber jumping mat on the floor, and three or four regular gymnasium mats in series, covering something over thirty feet, in all. A broad white line is

painted on the floor and on the rubber mat, about fifteen inches from the end. This is the starting line; and each boy must learn to run and toe this line as nearly as possible just before he makes his hop.

Beginning at sixteen feet from the starting line, lines one foot apart are painted on the floor alongside of the mats and marked 16, 17, 18, 19, 20, etc. The rubber mat with its starting line is easily kept in place. The other mats will shift and "creep" a little, but as the distances are marked on the floor, this does not matter.

As explained in the preceding chapter, the minimum distance in this exercise depends upon the boys' height, — those under four feet six inches having to cover sixteen feet, and so on, up.

The boys are measured and marked *A*, *B*, and *C* in the squad leader's book. He then knows what they have to do.

HIGH JUMP

For practice in the High Jump we provide two sets of jumping bars, one for the little fellows, and one for the big fellows who can

jump higher. The two squads break up automatically, each boy going to the bar that is placed at the height that suits him best. An ordinary gymnasium mat is placed behind each bar for the boys to land on, and a square yard of corrugated rubber is placed in front, from which they can "take off" without danger of slipping.

In jumping, as in practically all other sports, the tyro invariably starts wrong. The favorite, and apparently natural, way to do the High Jump, is to go over the bar sideways. It is easy, however, to demonstrate that the boy who uses the side jump must lift his body high enough to go over the bar in a sitting position, his hips clearing the bar and his body nearly vertical.

It pays in the end to learn the more difficult straight jump, — in which, taking off, say, with the right foot, the left leg is thrown high and straight to the front, the right foot being then snapped over in front of the left knee, the body clearing the bar, feet first, in an almost horizontal position. Taking off with the right and throwing the left leg up, naturally turns the body so that it goes over the bar facing to the right. Taking off with

the left foot would, of course, turn the body the other way. The important point is, that shooting over the bar, feet first, necessitates raising the weight of the trunk only a foot or so, while the side jump requires lifting the body high enough to *sit up* on the bar.

Four things must be observed by the boy who would master the art of high jumping:

1. Not to run too far or too fast; save the strength for the spring.
2. To be careful to take off far enough from the bar to bring the left leg up, straight, without kicking the bar.
3. To snap the right leg over *in front* of the left, not *behind* it.
4. Not to try for height until he has mastered the form,—which may require weeks of practice.

PUTTING THE SHOT

To begin with, we don't put a "shot." That would be rather dangerous with so many boys on the floor. We use instead a six pound medicine ball. This is rather clumsy, which makes it impossible to get perfect form. But we come pretty near it, and we get the

spirit of the exercise. The boys like it immensely,—and why shouldn't they? It is a fine manly exercise, one that they can follow up outside of school and in after years,—which is one of the great objects of the system; namely, to get boys, all of them, interested in wholesome outdoor sports and to help them secure such a degree of proficiency that they can enter into, and take part in sport anywhere.

Two lines, seven feet apart, painted on the floor, indicate the seven foot circle. Beginning at sixteen feet from the starting line, measuring lines, one foot apart, are painted on the floor, marked on one side, 16, 18, 20, 22, 24, etc., and on the other 17, 19, 21, 23, 25, etc. Thus the squad leader can see at a glance how many feet each boy "puts." At the other end of the gymnasium and a little to one side, another "circle" and set of lines run in the opposite direction.

Two squads are engaged in putting the shot at the same time and two medicine balls are in use. Squad one "puts" down on one side, the ball is stopped and rolled over to one of squad two, who "puts" it back on the other side. So the two balls are kept

circulating and no time is lost in sending them back to the starting line. With three balls in use there would be even less slack, or loss of time. And time is the big factor where you want to make "tries" at four different things inside of twenty minutes.

We find that, once the exercises are learned and the boys trained to change positions quickly and in good order, an ordinary class, of say forty-five boys, six squads of seven or eight boys each, may have several chances each at every one of the exercises.

When we introduce pitching, we shall have only one squad, divided into two parts, doing the High Jump. The point is that three squads in a class, six squads in a combined class, is a convenient number, and we shall, therefore, continue to have six different "positions" on the floor of the gymnasium for these six squads.

The target for practice in pitching (*See Fig. 18*) deserves a word of explanation here. On a regular gymnasium mat, we have painted a diagram, in height between an average boy's knee and shoulder, representing the space over the home plate, and within

which a ball must be placed to be called a "strike."

As the art of pitching consists of fooling the batter by "cutting the corners" of the

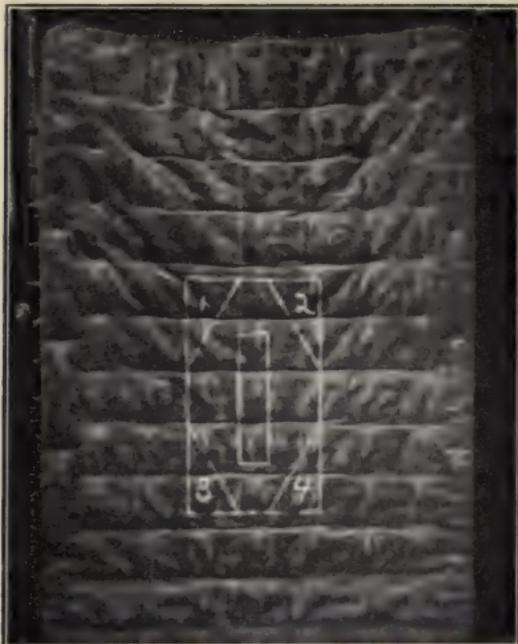


FIG. 18.—TARGET FOR PRACTICE IN PITCHING

plate, we have marked off the four corners and numbered them. The pitcher who can place four out of six balls in the four corners of the target scores ten points — the sum of 1, 2, 3, and 4. If he places three, he scores nine; two, scores seven; one, scores four. But down the middle of the target there is painted a narrow space called "the groove." If he

places the ball there, it is squarely over the middle of the plate, and the batter is credited with having made a hit. That stops the pitcher. Each boy is given six baseballs. He can waste two on "balls" and yet make a perfect score of ten. But the moment he places one in the "groove," he must stop and give way to the next boy, scoring only what he has made up to that point.

At the beginning, a distance of about thirty feet will be found sufficient. As the boys improve in control of the ball, the distance can be increased up to the regulation distance of the pitcher's box. This game is not yet in regular use, but it has been tried with a few of the boys, who found it so fascinating that they didn't want to quit practicing.

The exercises here described and the order in which they are taken up in a lesson have been arranged with considerable care, after some years of experiment and practice. We do not claim to have discovered an ideal set of exercises, but we do believe that with the incentive supplied by the ever-present idea of competition, our boys are receiving a training that makes for the five aims mentioned in the introductory chapter,—health, strength,

grace, love of wholesome sports, and the courage and pluck that "goes the limit," but without a thought of unfairness. We know that when our boys have finished the exercises above described, they have received what Dr. Crampton calls for, when he says: "We want in every lesson a strong vasomotor reaction, the heart and lungs stimulated, the skin reddened, the viscera squeezed and jarred, and each muscle given its appropriate work and growth stimulation."

If the reader will try the exercises himself, he will probably agree with this statement.

VI. SOME RESULTS ACHIEVED

This system of athletics for all boys originated in Public School 2, Manhattan, in the Winter of 1909-10. In June, 1910, the boys of No. 2, who had never before been heard from in athletics, missed the district championship by only one point! In June, 1911, they captured the district championship quite handily, and in June, 1912, they declined even to send a team to compete. They were too busy working up their rational system of athletics for all, to spend any time in developing a picked team to represent the school. As a result they captured every trophy for Class Athletics for which they were eligible to compete during that entire year. (See *P. S. A. L. Handbook, 1912, and cut on p. 85.*)

Unfortunately, just at that time, the author was transferred to his present school in the upper part of the Bronx, where it was necessary to begin again "from scratch."

The system has now been in use here for nearly two years and the results have been quite as startling in many ways.

In the Standing Broad Jump, the minimum has remained the same, but the number qualifying and the scores made have improved greatly.

In the Combination Dip and the Trunk Lifting, we were forced to put a limit to the number of points that could be won, because so many boys, after a few months, could keep on doing these exercises almost indefinitely. Finally, as stated before, we dropped Trunk Lifting as being too easy.

In the Hop, Step and Leap, whereas at the beginning it was only the exceptional boy who could qualify, it is now the exception who does not go beyond the minimum standard.

In Putting the Shot, the progress has not been so marked. This is due partly to the inherent difficulty of the exercise, but mostly to the fact that the medicine ball which we use is rather clumsy. The boys find it almost impossible to balance that big ball on the hand while doing the skip and the twist necessary for a good "put." We expect soon to



PLATFORM OF PUBLIC SCHOOL 2, NEW YORK CITY
(Showing Class Athletics trophies and special trophies for inter-class victories.)

secure a smaller ball of the same weight. When that is put into use, the scores for the Shot Putting will undoubtedly show a big rise.

In Deep Breathing some remarkable results have been achieved. One class showed an *average increase* of over one inch in expansion, in less than three months. This, of course, is exceptional. But a typical example of improvement is shown by comparing the records of the 8A class in November, 1913 — Average, 2.92 inches, — with the 8A record in November, 1914 — Average, 3.34 inches! And in taking these records, it must be borne in mind that no boy is credited with more than four inches expansion, even if he does go beyond that.

The following figures, taken last term from the records of a 7A class, will show the improvement attained by one group of boys, the first figure in each column indicating the boy's record at the beginning of the term, and the second figure, the record at the end:

	Chinning	Comb. Dip	Br. Jump	H. S. & L.
	times	times	feet	feet
O'Connor	6-10	0- 9	5 ³ -6 ³	20-26
Colonel	6-14	0-15	4 ⁶ -5 ³	18-22
Latronico	5-11	10-15	5 ³ -5 ⁹	17-22
Chaffee	2- 9	0-15	5 ³ -6 ⁹	18-22
Brooks	4-18	12-32	6 ⁹ -7 ³	20-30
Wolf	2- 9	0-15	5 -5 ⁹	18-24
Morse	0- 6	2- 9	5 ³ -5 ⁹	16-22
Cartier	7-13	15-37	5 ⁹ -7 ⁹	22-32

VII. THE PENTATHLON

Athletic contests between schools are unquestionably a great help in developing what we call "school spirit,"—that sense of unity and of pride in the institution of which we are a part. This appeals to all, whether contestants or not, but how much more keenly to those who take part, than to those who only look on! It is such a fine thing to feel that *we* have helped to win that trophy for our school, that *we* took part in that contest and did our best, even though we did lose!

Then why not give every one possible a chance to take an active part in the school athletic competitions? Why should that privilege be reserved for just a few, and that few very often not the most desirable members of the school? Why should the competitions be of such a character as necessarily to allow only a few to take part? Why shouldn't every one in good health be given the keen pleasure and the valuable training, physical and moral, that are the fruits of

honest athletic competition? And why should not the contests be of such a character as to engage the largest possible number and, at the same time, show the results of good all-around physical training?

These are purely rhetorical questions, of course, and there is but one answer to them that is worth considering. Indeed the answer is so self-evident, that a number of interesting plans have already been worked out by physical training directors in different parts of the country.

“The Schoolboy Pentathlon” is our contribution to this phase of the work. It is our plan for inter-school athletics. For more than three years now our “school team” has consisted of 80 per cent. of the boys on register in all the classes from the Fifth to the Eighth school year. We have challenged the schools in our neighborhood, large and small, to match their boys against ours, grade by grade, in a series of competitions.

We have borrowed the old Greek idea of the Pentathlon, the five contests of which constitute an all-around championship. We have modified and substituted to meet conditions, so that we now offer two sets of exer-



FIG. 19.—PENTATHLON TROPHY

cises by way of variety,—one for use during the Fall Term, and one during the Spring Term.

THE PENTATHLON

<i>Fall Term</i>	<i>Spring Term</i>
Running	Running
Deep Breathing	Deep Breathing
Combination Dip	High Jump
Standing Broad Jump	Hop, Step, and Leap
Chinning the Bar	Shot Put

With the permission and encouragement of Dr. Taylor, District Superintendent, circulars were sent out to the various schools of the district, inviting them to compete. Five schools accepted the invitation. Next, circulars describing the exercises were sent out, then conferences were held with representatives of these schools, and finally 2220 boys trained and competed.

The parents of our boys liked the plan so well that a number of them contributed from one to ten dollars each to a fund to purchase a permanent set of trophies. About one hundred dollars was contributed in this way, with which a specially designed set of wooden plaques, with pendant bars for each grade, was purchased. (*See Fig. 19.*) These plaques remain in the possession of the school that wins them, until won by another school.

Of the eight grade trophies (5A to 8B), four were won by our boys, two by Public School 13, one by Public School 42, and one by Public School 8.

The manner of conducting these contests is very much like the Class Athletics conducted by the Public Schools Athletic League. Each school makes its own tests, sending in

its report to a committee consisting of the special teacher of physical training and two men selected from the schools competing. These men compare the reports and, with the permission of the authorities, visit the schools claiming the highest average in each grade.

If there are several classes in a grade, they draw lots and proceed to test the class so chosen. If that class equals the record they have sent in, it is presumed that the other classes will do the same and that the report is correct, the school being thereupon declared the winner for that grade. If, however, that class upon being tested fails to equal the record sent in, the report is presumed to be incorrect, the school that stood second being thereupon tested. Where there are several grades to be tested in the same school, the members of the committee divide the classes between them, so that in two, or at the most, three afternoons, all the necessary testing can be done. Where one class claims an average very much higher than the others in the same school, we arrange that this class must also be tested by the committee.

We claim for this method of conducting

inter-school contests the following advantages:

1. It does away with all questions of "eligibility" — the great stumbling block and source of scandal in amateur athletics.
2. It actively engages practically every boy who is physically able to compete, — all results being based on the achievements of 80 per cent. of the register of each grade.
3. It prevents all possibility of "framing up" a class, or training one class and neglecting the others.
4. It gives every boy an incentive for vigorous training in good all-around exercises, while avoiding, absolutely, the danger of injury from over-training.

The plan has now passed the experimental stage. It has been tried with success in two widely different sections of the city, — the crowded lower East Side of Manhattan, and the sparsely inhabited upper part of the Bronx. It has been approved and recommended for general adoption by the Board of Education of the City of New York, and is frankly offered as a substitute for the present style of inter-school athletics.

Any other exercises having a real physical



FIELD DAY, MAY, 1914, OF PUBLIC SCHOOL 33, NEW YORK CITY
HELD ON OHIO FIELD, BY PERMISSION OF NEW YORK UNIVERSITY
(Eighty per cent. of the boy and girl spectators take part in the games.)

training value, and capable of exact measurement, may be substituted at will. In conducting these inter-school competitions, we have, so far, used our "point system" and minimum standards. But it would be quite feasible to disregard the minimum standards and the "points," simply taking the average in each event and awarding the prize to the grade winning the most events.

Two neighboring schools could easily conduct a dual "meet" on a Field Day, by agreeing in advance on a set of exercises, putting in the field 80 per cent. of their boys, and awarding the victory, as above suggested, to the school winning the majority of the events. Properly organized and handled, the boys of two large schools can be put through a set of, say, three events, in a little over two hours.

A FIELD DAY OF RATIONAL ATHLETICS

In the appendix will be found reproductions of three programs of Field Days conducted under this system in 1912, 1913, and 1914, respectively.

In arranging a program for a Field Day, three factors must be considered:

1. The amount of good and the amount of fun the children are going to get out of it.
2. The time the program will take.
3. The interest of the spectators in the various events.

We find, as a result of our experience in the past three years, that we have succeeded perfectly in the second of these factors, but not entirely in the first and third.

With careful preparation and the hearty coöperation of the class teachers, who, men and women alike, have taken hold of this thing because they feel that this kind of athletics is worth while, we have been able to "put through" such elaborate programs as those referred to, in about two hours! When it is realized that over nine hundred boys took part in the games in 1912, and when the number and variety of things they did is considered, this will seem almost incredible.

With respect to the first factor referred to above, we have succeeded to a wonderful degree in making the games intensely interesting to all the pupils,—boys and girls alike. We have failed, however, in one respect, mainly because a few of the inter-class contests were so complicated that the results had

to be figured out afterward, thus making it impossible to announce, then and there, which class had won. This suspense rather spoiled the fun for the winning class. But we shall not make that mistake again.

Another detail in which we failed is that, in order to equalize the numbers competing for certain classes, some children were barred who were ready and anxious to compete,—another mistake which we shall not repeat. Every boy and girl who has been favorably passed upon by the doctor, who wants to enter, and whose parents are willing, will be given a chance to take part.

In arranging the program for our next Field Day we shall (1) discard the minimum limits and the "point system," taking simply averages; and (2) limit to two the number of events to be competed for by each group,—one track and one field event.

In this way it will be possible for the results to be announced immediately after the close of the competition and at the same time the proceedings will be so simplified that the spectators, interested parents mostly, can keep track of what is going on. The main fault in the past has been, not any lack of interest

and enthusiasm on the part of the children, but rather that the proceedings have been somewhat bewildering to the spectator—rather too much like a five-ringed circus, where you cannot possibly see everything.

The program for our next Field Day will probably be something like this:

8B Some running event and Shot Putting

8A	"	"	"	"	High Jump
7B	"	"	"	"	Pitching
7A	"	"	"	"	Hop, Step, and Leap
6B	"	"	"	"	Standing Broad Jump
6A	"	"	"	"	Combination Dip
5B	"	"	"	"	Chinning
5A	"	"	"	"	Deep Breathing

This is, of course, only a tentative program. The exact arrangement of the events would be determined upon only a week or two before the Field Day, to prevent anything like specializing in certain exercises.

Allowing five for a first, three for a second, and one for a third, the chances of a "tie" in any event would be small. When a tie does

occur, the toss of a coin should determine the victor.

With such a program as this, there will not be too many events going on at once, the results can be announced immediately, the children will be satisfied in knowing who has won, and the spectators will be able to keep track of what is going on.



CAROLYN MILLER: BEST GIRL ATHLETE

Height, 5 ft. 4 in.; weight, 120 lbs.; Age, 13 yrs. 10 mo.

Rating in Posture, 10; Alertness, 10; Running, 10; Hygiene, 10.

Basket Ball Throw, 55 ft.; Putting in Golf, *Average*, 2 holes out of 3:

Tennis Serving, *Average*, 2 out of 3; Basket Ball Goals, 5 in 30 sec.;

Baseball Throw, *Average*, 13 out of 15; Chest Expansion, $3\frac{1}{2}$ in.

VIII. SOME EXPERIMENTS WITH GIRLS

The problem of physical training for girls has always been a knotty one. Prior to pubescence, girls differ so little from boys of the same age that they can be treated very much like boys, except that exhibitions that would be quite proper for boys would be bad even for small girls, because they might tend to destroy the maidenly modesty that is, or should be, one of girlhood's greatest charms. We must carefully avoid anything that will tend to make our girls bold.

When they reach the age of pubescence, physiological factors, requiring careful study on the part of those who attempt anything in the line of athletics for girls, enter into the problem. Athletic competitions, modeled upon the intensive style of athletics now in use among boys, have proved to be totally unsuitable for girls. So we have fallen back upon folk dancing, basket ball, walking clubs, and other such activities.

But we feel that a system of Rational Athletics, with exercises specially adapted to the tastes and the needs of girls, would be a long step toward the solution of this vitally interesting problem. To this end, we have been experimenting during the past year with a series of events designed to give our girls wholesome exercise, to develop skill, agility, and muscular coördination, and to arouse an interest in some good outdoor sports. With this idea in mind we have combined a great variety of running events (which always appeal to girls) with a set of exercises consisting of:

1. Throwing a Baseball, — for accuracy.
2. Serving in Tennis.
3. Basket Ball Throwing, — for distance.
4. "Putting," in Golf.
5. "Shooting Goals" with basket ball.

This plan is still in the experimental stage. No standards and no system of points have yet been worked out. But judging by the way the Eighth Year girls took hold, and by the fact that the Seventh Year girls very soon asked to be allowed to try the new exercises also, we feel that we are on the right road.

The lesson for girls is conducted in the same manner as the lesson for boys. There are six squads, — No. 1, going to the position for the Baseball Throw, No. 2, to Serving in Tennis, No. 3, to Putting in Golf, No. 4, to

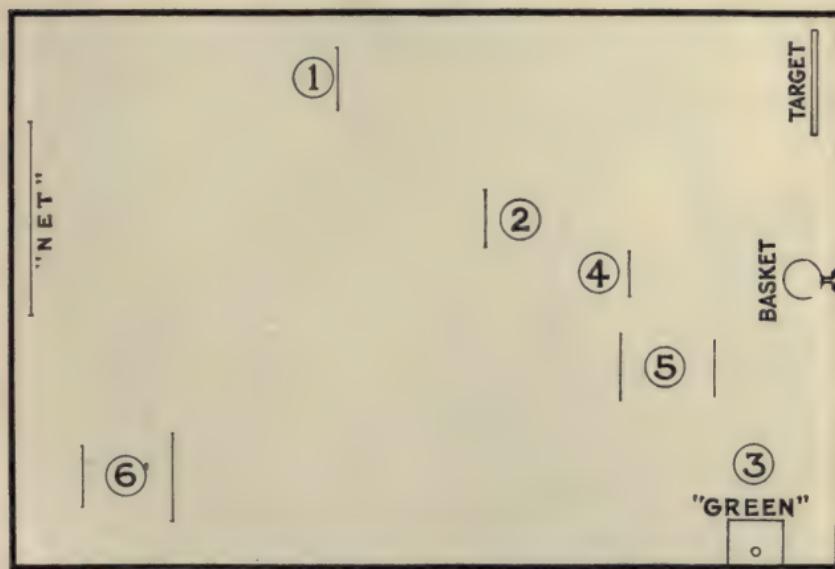


Fig. 20.—FLOOR PLAN OF GIRLS' GYMNASIUM SHOWING ARRANGEMENT OF SQUADS

Shooting Goals, Nos. 5 and 6, to Basket Ball Throw. (*See Fig. 20.*)

One of the big gymnasium mats used by the boys in the Hop, Step, and Leap has a large target painted on the underside. It lies near a doorway which is equipped with ropes and pulleys so that the mat can be drawn up and

hung vertically. The girls stand about thirty-five feet away, each one in turn throwing three baseballs at the target. The bull's-eye is twenty inches in diameter, each ring being ten inches wide. A bull's-eye scores five; a first ring three; a second ring one; outside of that, zero.

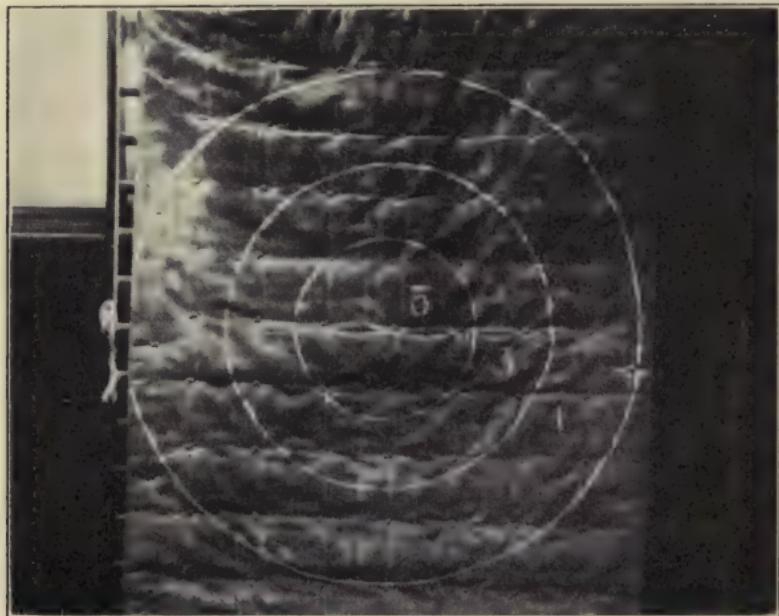


FIG. 21.—TARGET FOR BASEBALL THROWING

The target is placed in a corner where no one is likely to be injured by the flying balls. One girl, who is stationed behind a big pillar, picks up the balls and rolls them back.

To teach the rudiments of serving a ball in tennis, a strip of cloth, three feet wide and

about ten feet long, is fastened to the wall where there is no apparatus. The lower edge of the cloth is about the height of a tennis net above the floor. To place a ball in the service court, it must be put over the net, but not so high that it will go beyond the inner court on the other side. We consider that a ball which strikes the strip of cloth is "in." On our Field Day we rigged up two tennis nets, one above the other, with a gap of three feet between them. The girls, standing at the distance of the service line, had to place the ball between the two nets. Anyone who thinks this is child's play is invited to try it! We know, however, that girls who never handled a racquet in their lives before are getting interested in the game.

The Basket Ball Throw for distance is conducted in the same way, and on the same part of the floor which is marked out for the boys' Shot Putting. Two squads throwing from opposite ends of the gymnasium keep two or three basket balls in lively circulation.

Off in a quiet corner is another group of girls gathered around an "Indoor Golf" game, consisting of a small inclined plane with a cup in the middle. Solid rubber balls the size

of a golf ball are placed on the floor about three feet away from the plane, and, with a wooden "putter," the girls try to "put" the ball into the hole. The ball rolling up the little incline is retarded very much the same as it would be by the grass on a "putting green."

It may be the novelty of the idea, or it may be the fascination of "the grand old game," we don't yet know which, but we do know that the girls like this exercise immensely.

We wish we could introduce practice in "driving," because it is such a magnificent exercise, and because it would help even more to awaken interest in the game and to make more and more of our girls, golf players. Incidentally, we don't know any better service that we could render them than this. But a "driver" swings through such a large arc that it becomes a deadly weapon where a large number of children are practicing.

Practice in shooting goals with a basket ball is taken by another squad, sometimes shooting from the "foul line," sometimes on the run, the ball being thrown at the player, who runs, "dribbles" once, and "shoots." For testing purposes, each girl is credited with



FIG. 22.—THE GIRLS' SQUADS IN ACTION

(Showing five squads at work, the sixth—throwing the basket ball—being out of range of the camera.)

the number of times she can put the ball into the basket in thirty seconds, no one else being allowed to touch the ball during that time.

The favorite running game is the potato race, using the same course, with the same modifications for the different years, as previously described for the boys. (See page 44.) It will be found interesting to compare, occasionally, the time made by the girls with that made by the boys in corresponding classes. The girls, not infrequently, beat the boys at this exercise.

The "potato race" in any form is a magnificent exercise. It is keenly exciting, and develops both speed and control; while the stooping exercises the big muscles of the back and thighs, squeezes the viscera, forces deep breathing, and certainly stimulates the circulation. When all these results are secured in an atmosphere of keen enjoyment, we are getting nearly 100 per cent. of physical training value.

With our physical training lessons organized in this way, we find that the attitude of both the teacher and the girls has changed. The former has to watch carefully to prevent girls from taking part on days when it is better for them to keep still, and the girls who are excluded because they forgot to bring their rubber shoes are rather an aggrieved set of young ladies. Requests to be excused are rare, and that would seem to tell the story better than anything else.

Unless all signs fail we shall have, in a year or two, a set of exercises for girls as complete and as interesting as those previously described for boys.

RECORDS OF EIGHTH YEAR GIRLS

The records, taken recently, of thirty Eighth Year girls, not selected, show an average distance of forty feet in the Basket Ball Throw; two out of three good "serves" in tennis; a score of nine out of a possible fifteen points in throwing the baseball at the target; one "put" out of three on the golf green; and three goals shot in thirty seconds. Considering that these girls have had less than one year of practice, these results are remarkably good.

IX. RATIONAL ATHLETICS FOR ADULTS

Any system of physical training that does not provide for a method of "following up" is defective, in that it is likely to be dropped after school. Let us see what there is in the exercises and the scoring system here presented that will serve as a basis for home practice for the boys who have been trained in Rational Athletics and for men who are trying to keep in good condition.

As we all know, it is one thing to select a good set of daily exercises, and quite another to practice or follow them up with no further stimulus than the hope of the benefit to be derived, which latter too often fades away in the consciousness of sore muscles and stretched ligaments. Most of us must admit that we have not the necessary will power to persevere in such a course.

To meet this generally acknowledged weakness, I would propose an adaptation of the methods we use in school, so that the man who starts out to exercise at home will have

a definite goal toward which to work and a norm by which to measure his progress. In other words he will be playing a game, just as one plays golf alone, striving to equal or beat his best previous score.

Taking the five exercises used in school which may most easily be used at home, we adopt the minimum standards prescribed for 8B boys (graduating class) with a maximum of seventy-five points to be striven for. The "tired business man" who can earn his seventy-five points, or anything near it, need not worry much about his condition!

The writer would be ashamed to mention his score the first time he seriously tried this system on himself. But piqued pride is a powerful stimulant, so it wasn't long before he began to show improvement. He found, however, that there was quite a difference between demonstrating the exercises to classes of boys or conferences of teachers, and extending himself "to go the limit" in any one of them.

The exercises that lend themselves best to use at home are: Running (in place); Chinning the Bar; Combination Dip; Trunk Lifting, and Deep Breathing.

Running in place, going through the motions of running, without advancing, will be found vigorous enough exercise if kept up, lifting the feet well at each step, keeping up "on the toes," not allowing the heels to touch the floor. Say we fix a minimum of one minute, for which we allow five points credit; continued for two minutes, ten points; for three minutes, fifteen points, calling the last, the maximum.

For Chinning the Bar, the 8B standard will do; namely, seven times, five points; twelve times, ten points; seventeen times, fifteen points.

For Combination Dip the standards are the same as in Chinning: seven times, five points; twelve times, ten points; seventeen times, fifteen points.

For Trunk Lifting, fifteen times, five points; twenty times, ten points; twenty-five times, fifteen points. Trunk Lifting consists in lying flat on the back, arms folded, and raising the body to a sitting position without letting the heels leave the floor.

In Chest Expansion for boys, two and one-half inches equals five points; three inches, eight points; three and one-half inches, eleven

points; four inches, fifteen points. For men I should add an inch to these requirements, making the minimum three and one-half inches and the maximum five inches. The writer does five and one-half inches easily, but sees no advantage in trying to increase his expansion. In this, as in all our other exercises, we are not striving to break records by specializing, but rather to build up a good average in normal health.

A Record Card, showing the standards and spaces for recording progress, is shown.

							1 min.	5 pts.
Running							2 " "	10 "
							3 " "	15 "
Chinning							7 times	5 "
							12 " "	10 "
							17 " "	15 "
Comb. Dip							7 " "	5 "
							12 " "	10 "
							17 " "	15 "
Trunk Lifting							15 " "	5 "
							20 " "	10 "
							25 " "	15 "
Chest Expansion							(3½) 2½ inches	5 "
							(4) 3 " "	8 "
							(4½) 3½ " "	11 "
							(5) 4 " "	15 "

FIG. 23.—THE ADULT'S RECORD CARD

(Showing the "tired business man" how he may best keep tally of his own physical development.)

This, briefly stated, is our plan for adapting Rational Athletics to home practice for adults and for boys who have left school. The man who succeeds in earning the maximum of seventy-five points is allowed figuratively to pin upon himself a Rational Athlete's Senior Medal.

APPENDIX

An Exhibition of Rational Athletics

TUESDAY, MAY 28, 1912, at 1:15 P.M.

PROGRAM

PART I

I. INTER-CLASS RELAY SACK RACE

4A1, 4A2 and 3B1

Teams of 36 boys from each class

II. INTER-CLASS RELAY POTATO RACE

4B1, 4AE1 and 4AE2

Teams of 30 boys from each class

III. INTER-CLASS CONTEST IN "TRUNK LIFTING"

4BE1, 4BE2 and 4BE3

Entire class (except those excluded by the Doctor).

Groups of 5 from each class (15) tested at once.

"Trunk Lifting" consists of lying on the back and raising oneself to a sitting position.

IV. INTER-CLASS CONTEST IN THE "COMBINATION DIP"

5A1, 5A2, 5B1, 5B2

(Same as above)

The "Combination Dip" consists of resting on hands and toes, touching chest to the ground and rising, three times, then springing to standing position.

V. INTER-CLASS CONTEST IN THE "STANDING BROAD JUMP."

5AE2 and 5AE3

(Same as above)

PROGRAM

(Continued)

VI. INTER-CLASS CONTEST IN "CHINNING THE BAR"

5Be1 and 5Be2

VII. INTER-CLASS FLAG RELAY RACE

6A1, 6A2, 6B1, 6B2, 6B3

VIII. INTER-CLASS CONTEST IN "HOP, STEP AND LEAP"

6Ae1, 6Ae2 and 6Ae3

IX. INTER-CLASS CONTEST IN "SHOT PUT"

6Be1 and 6Be2

The boys use a 6 lb. medicine ball instead of a shot,
as it is safer.

PART II

X. ALL-AROUND CONTEST

5Ae1 and 5Be3

A selected team of boys from these two classes will
compete in all the following exercises:

1. CHINNING THE BAR	5. HOP, STEP AND LEAP
2. CHEST EXPANSION	6. TRUNK LIFTING
3. BROAD JUMP	7. SHOT PUT
4. COMBINATION DIP	8. RUNNING (60 yds.)

They will thus give an exhibition of the training
every boy in the school receives in the course
of the year.

FIELD DAY

THURSDAY, JUNE 5, 1913, AT 1:30 P.M.

INTER-CLASS CONTESTS — BOYS

8 B. Red*

8 A. Blue

*vs.*7 B¹. Green7 B². Pink7 A¹. Lavender*vs.*7 A². Purple6 B¹. White*vs.*6 B². Orange6 A¹. Cerise*vs.*6 A². Yellow5 B¹. Light Blue*vs.*5 B². Maroon5 A¹. Lt. Green*vs.*5 A². Gray

4 B. Tan

vs.

4 A. Dk. Brown

I

1. Flag Relay, Scratch, $\frac{1}{4}$ of the track
2. Shot Put (Handicap $\frac{1}{2}$ ft. for 7 B)
3. Hop, Step and Leap (Handicap for height)

II

1. Flag Relay, one-sixth of the track
2. Combination Dip

III

1. Class Running (60 Yards)
2. Standing Broad Jump

IV

1. Shuttle Relay (50 Yards)
2. Deep Breathing

V

1. Class Running (40 yards)
2. Chinning the Bar

VI

1. Sack Relay
2. Trunk Lifting

VII

Class Running (40 Yards)

* The color assigned to each class will be carried by the runner or otherwise displayed so that the spectators may distinguish the classes.

VIII

RUNNING BROAD JUMP

(FOR BOYS UNDER 95 LBS.)

No.	Name	Class	No.	Name	Class
38	McDonald, Daniel	7 B 1	51	Hurley, Edward	5 B 1
39	Gorman, William	7 B 1	52	Cowper, Joseph	5 B 2
40	Barnes, William	8 A	53	Donato, Dominic	6 A 2
41	Collins, John	8 A	54	Diehl, Francis	8 B
42	Rogers, Robert	8 A	55	McBride, John	6 B 2
43	Millard, Orson	8 A	56	Kalbach, Charles	6 B 2
44	McGrath, Martin	7 A 2	57	Buckley, James	5 A 2
45	Brown, Leroy	7 A 2	58	Bull, Norman	7 A 1
46	Cutter, Harold	7 A 2	59	McBride, James	7 A 1
47	Corbett, William	7 A 2	60	Altheimer, Melville	7 A 1
48	Heineman, Nathan	7 A 2	61	Kearns, Burtzell	7 B 2
49	Mundorf, Anton	7 A 2	62	Thorn, Sanford	8 B
50	Marra, Anthony	7 A 2	63	Zubrod, Paul	8 B

Won by 2nd 3rd

Distance

INTER-CLASS CONTESTS — GIRLS

IX

8 B. Red
vs.
 8 A. Dark Blue

1. Obstacle Relay
2. Captain Ball

X

7 B¹. Green
vs.
 7 B². Pink

1. Flag Relay (one-sixth of the track)
2. End Ball

XI

6 B. White
vs.
 6 A. Maroon

1. Potato Shuttle Relay
2. Basket Ball Throw

XII

5 B. Light Blue
vs.
 5 A. Yellow

1. Needle and Thread Race
2. Dodge Ball

XIII

4 B. Lavender
vs.
 4 A. Purple

1. All Up Relay
2. Pass Ball

XIV

EXHIBITION DRILL

BY 45 SELECTED BOYS

This drill is the same that will be given in Central Park on June 6, by 10,000 boys.

XV

80 YARD DASH (Handicap)

(UNLIMITED WEIGHT)

No.	Name	Class	No.	Name	Class
1	Shultz, Arthur	7 B 1	20	Flomer, Alfred	6 B 2
2	Louden, Ralph	7 B 1	21	Gavin, Percy	6 A 2
3	Sheridan, Robert	7 B 1	22	Gorman, Raymond	6 A 1
4	Schneider, William	8 A	23	Severance, Erastus	6 A 1
5	Sattler, Albert	8 A	24	Arra, James	6 A 1
6	Wines, Harris	8 A	25	Warner, Stanley	6 A 1
7	Stanlisso, Eric	8 A	26	Nealey, William	6 A 1
8	Machlett, Raymond	8 A	27	Kunzman, Herbert	6 A 1
9	Gladwin, Harold	8 A	28	Theise, James	6 A 1
10	Buckley, William	8 B	29	Morse, Maynard	5 B 1
11	Brown, Charles	6 B 1	30	MacDonald, Allen	5 B 1
12	Kidd, James	6 B 1	31	Sustman, John	7 B 1
13	Brunner, Fred.	6 B 1	32	Keeler, Arthur	7 B 2
14	Olsen, George	6 B 1	33	Burnside, George	7 B 2
15	Kempler, Leo	6 B 1	34	Holland, John	8 B
16	Cotter, John	6 B 1	35	Hamman, George	8 B
17	Hale, Nathan	6 B 1	36	Widrewitz, Belmont	8 B
18	Cowan, Everette	6 B 2	37	Mackintosh, Walter	8 B
19	Bulter, Cornelius	6 B 2			

TRIAL HEATS

1.....	2.....	3.....
1.....	2.....	3.....
1.....	2.....	3.....
1.....	2.....	3.....
1.....	2.....	3.....

1.....2.....3.....

SEMI-FINAL

1.....2.....3.....

1.....2.....3.....

FINAL

1.....2.....3.....

FIELD DAY

FRIDAY, MAY 15, 1914, at 9 A. M.

INTER-CLASS CONTESTS—BOYS

I. PENTATHLON

8B1. Red	1. Running—80 yards
8B2. Blue	2. Deep Breathing (Chest Expansion)
8A. Green	3. Shot Put
	4. Hop, Step and Leap
	5. Trunk Lifting

II. PENTATHLON

7B1. Pink	1. Running—60 yards
7B2. Lavender	2. Deep Breathing
7A1. Purple	3. Chinning the Bar
7A2. White	4. Combination Dip
	5. Standing Broad Jump

III.

6B1. Orange	1. Flag Relay
6B2. Cerise	2. Hop, Step and Leap

IV.

6A1. Yellow	1. Class Running—50 yards
6A2. Light Blue	2. Standing Broad Jump

V.

5B. Maroon	1. Shuttle Relay
5A1. Light Green	2. Trunk Lifting
5A2. Gray	

VI.

4B1. Tan	Potato Race
4B2. Dark Brown	

VII.

4A1. Red and White	Sack Race
4A2. Blue and White	

The color assigned to each class will be carried by the runner or otherwise displayed so that the spectators may distinguish the classes.

VIII.

80 YARD DASH (*Unlimited Weight*)

No.	Name	Class	No.	Name	Class
1	Burnside, George	8B1	4	Oneil, Jack	8B1
2	Irving, Edgar	8B1	5	Tighe, Joseph	8B2
3	Keeler, Arthur	8B1	6	Sheridan, Robert	8B2

No.	Name	Class	No.	Name	Class
7	Hanecke, Edwin	8B2	16	Kuestner, Wilbert	6B1
8	Duernberger, Walter	8B2	17	Hynes, Eugene	6B2
9	Marra, Anthony	8A	18	Manco, Joseph	6B2
10	Heineman, Nathan	8A	19	Sustman, George	5A1
11	Egan, Eugene	8A	20	Morgenweck, Adolph	5A1
12	Goldman, Milton	8A	21	Biasotti, Alfred	5A2
13	Hughes, Harold	8A	22	Unger, John	5A2
14	Cotter, John	7B1	23	Brunner, Fred	7B1
15	Flomer, Alfred	7B1	24	Freeman, Stuart	7B1

TRIAL HEATS

1.....	2.....	3.....
1.....	2.....	3.....
1.....	2.....	3.....
1.....	2.....	3.....
1.....	2.....	3.....

1..... 2..... 3.....

SEMI-FINAL

1.....	2.....	3.....
1.....	2.....	3.....
1.....	2.....	3.....

FINAL

1..... 2..... 3.....

INTER-CLASS CONTESTS — GIRLS

IX

8B1. Red	1. All Up Relay (Modified)
8B2. Blue	2. Baseball Throw, for accuracy
8A. Green	3. Captain Ball

X

7B. Pink	1. Obstacle Relay
7A1. Purple	2. Tennis Serving
7A2. White	3. End Ball

XI

6B1. Orange	1. Flag Relay
6B2. Cerise	2. Basket Ball Throw, for distance
6A1. Yellow	
6A2. Lt. Blue	

XII

5B. Maroon	1. Needle and Thread Race
5A1. Lt. Green	2. Dodge Ball
5A2. Gray	

XIII

4B. Tan	1. Potato Race
4A. Dk. Brown	2. Pass Ball

XIV

60 YARD DASH (Boys under 95 lbs.)

No.	Name	Class	No.	Name	Class
25	Guerriero, Thomas	8B1	64	Mazzotti, Ferdinand	6A1
26	Daglish, Walter	8B1	65	Weis, Arthur	6A1
27	Kearns, Robert	8B1	66	Heinemann, Fred	6A1
28	Sustman, John	8B2	67	Newman, George	6A1
29	Gorman, William	8B2	68	Sullivan, John	6A1
30	Heine, Walter	8B2	69	Hunter, Robert	6A1
31	Corbett, William	8A	70	Finnegan, William	6A1
32	Brown, Leroy	8A	71	Buckley, William	6A1
33	Cutter, Harold	8A	72	Cassidy, Francis S.	6A2
34	Zubrod, Julius	8A	73	Hirsch, Lawrence	6A2
35	Mundorf, Anton	8A	74	Murphy, Francis	6A2
36	Lynch, Frank	7B1	75	Quinn, James	6A2
37	Kalbach, Charles	7B1	76	Sternschuss, Arnold	6A2
38	McQuaid, George	7B2	77	Biasotti, David	5A1
39	McKenna, Cline	7B2	78	De Santis, Frank	5A1
40	Hale, Nathan	7B2	79	Tench, Donald	5A1
41	Kinsella, Walter	7A1	80	Hansen, Lawrence	5A1
42	Severance, Erastus	7A1	81	Arbucchio, Paul	5A2
43	Theise, James	7A1	82	Longa, Alfred	5A2
44	Harbeck, Frank	7A1	83	Wainwright, Paul	5A1
45	Byrne, Victor	7A1	84	Helahan, John	5A2
46	Biasotti, Edward	7A1	85	Davis, Franklin	5A2
47	Warner, Stanley	7A1	86	Dennerlein, Herbert	5A2
48	Brooks, Seth	7A2	87	Hohnsted, Henry	5A2
49	Chaffee, Clarence	7A2	88	Woerner, Albert	5B
50	O'Connor, Albert	7A2	89	Corbett, Frank	5B
51	Keene, Simon	6B1	90	Enders, Carl	5B
52	McGinnis, Simon	6B1	91	Burnside, William	5B
53	Schultz, Herbert	6B1	92	Bailey, John	5B
54	Bronte, Emery	6B2	93	Reilly, John	5B
55	Hunter, Paul	6B2	94	Donohoe, Albert	5B
56	Fried, Fred	6B2	95	Ashley, Anthony	5B
57	MacDonald, Allan	6B2	96	Fraser, Daniel	5B
58	Keller, John	6B2	97	Shaw, Raymond	5B
59	Reilly, Raymond	6B2	98	Duernberger, Elwood	5B
60	Millard, Harry	6B2	99	Cowan, David	5B
61	Long, David	6A1	100	Mahoney, Jerome	5B
62	Greenwald, Philip	6A1	101	Brown, Edward	5B
63	Byrne, Frank	6A1	102	Pagliaro, Frank	7B1

SEMI-FINALS

1st Heat — Won by	2nd	Time
2nd " " "	2nd	Time
3rd " " "	2nd	Time

FINAL

Won by	2nd	3rd	4th	Time
--------------	-----------	-----------	-----------	------------

N.B. — Trials were run off previously.

INDEX

ADULTS, 110
ALDINGER, DR., 10, 35 ff.
APPARATUS
 Low cost, 39.
ATHLETICS
 Money spent on, 23 ff.
BASEBALL THROW
 Method, 103
 Standards, 104
BASKET BALL
 Shooting Goals, 106
CHEST EXPANSION
 Method, 60
 Standards, 48
CHINNING THE BAR
 Method, 68
 Standards, 45, 53
CLASS ATHLETICS, 83, 91 ff.
COLLEGE HEROES, 28
COMBINATION DIP
 Method, 71 ff.
 Standards, 46, 54
COMMERCIALISM, 29
CRAMPTON, DR., 10, 22, 34 ff., 82
DEEP BREATHING
 Method, 59 ff.
 Standards, 48, 54
ELIGIBILITY, 50
EMULATION
 Individual against self, 18
 Class, 18
 Grade, 18
 School, 18
EXALTATION OF THE INDIVIDUAL, 27
FIELD DAY, 95 ff.
FOLLOWING UP RATIONAL ATHLETICS, 110
GIRLS' ATHLETICS, 101
GOLF—PUTTING IN, 105
HEIGHT, 37
HIGH JUMP
 Method, 75
 Standards, 47, 54
HONOR OF THE SCHOOL, 88
HOP, STEP, AND LEAP
 Method, 66, 74
 Standards, 47, 54
HYGIENE, 34, 41
INTER-SCHOOL CONTESTS, 18, 88 ff.
NEGLECTING THE MANY, 30
NEW YORK COURSE OF STUDY, 34
OVERTRAINING THE FEW, 30 ff.

PENTATHLON, 88 ff.
PHYSICAL TRAINING
 Aims in, 16
 Records, 35 ff.
 Lesson, 34
PITCHING, 79 ff.
POTATO RACE
 Subst. for dist. running, 44
 Method, 44, 107
 Standards, 44 ff.
PROGRAMS FOR FIELD DAYS,
 116 ff.
PUTTING IN GOLF, 105

RECORDS
 Individual, 35 ff., 87
 Class, 87, 109
 Grade, 51 ff.
 School, 83, 91
RESULTS, FALL TERM, 1914, 52
RUNNING
 Method, 41 ff.
 Standards, 44

SENIOR ATHLETE, 49
SERVING IN TENNIS, 104 ff.
SHOOTING GOALS, 106

SHOT PUT
 Method, 66, 77
 Standards, 48, 54
SPECIALIZATION, 25
SQUADS
 Organization, 55
 Classroom Work, 56
 Gymnasium Work, 62, 102
 ff.
STANDARDS
 Basis for, 51 ff.
STANDING BROAD JUMP
 Method, 68
 Standards, 46, 53

TENNIS SERVICE
 Method, 104
 Standards, 105
THROWING BASEBALL, 103
THROWING BASKET BALL, 105
TROPHIES
 Class, 83, 88 ff.
 School, 83, 88 ff.
TRUNK LIFTING, 54

WEIGHING, 37
WINGATE; GEN. GEO. W., 5, 9



Reilly, Frederick J.

Rational athletics for boys.

138284

Reilly

138284

UNIVERSITY OF TORONTO
LIBRARY

371.73 R

Do not
remove
the card
from this
Pocket.

Acme Library Card Pocket

Under Pat. "Ref. Index File."

Made by LIBRARY BUREAU

MMY
J

